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ABSTRACT

Factors influencing persistence/nonpersistence of Black and Hispanic doctoral students at the graduate entry level were studied, along with institutional practices that affect minority participation in graduate education. For the first part of the study, 63 persisting and nonpersisting doctoral students were interviewed regarding their experiences in graduate school, and information was collected about their background and personal charactersitics. Characteristics and experiences of persisters included high achievement in high school, supportive advisers, participation in professional activities during graduate school, and a desire for knowledge. In the second part of the study, 52 faculty and staff at six graduate institutions were interviewed to determine their policies and practices regarding minority doctoral students. It was found that the level of support for minority students varied greatly among colleges. Efforts that seemed to encourage minority student participation included an institution-wide policy regarding minority graduate students, coordination of services for minority students by a unit above the departmental level, special admissions arrangements, and support services focused on minority students' needs. (Author/SW)

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RETENTION OF BLACK AND HISPANIC DOCTORAL STUDENTS

Part I: Personal and Background Characteristics of Persisting and Nonpersisting Black and Hispanic Graduate Students

Part II: Retention of Minority Doctoral Students: Institutional Policies and Practices

Beatriz Chu Clewell

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Abstract

This study tested the feasibility of determining whether factors influencing persistence and nonpersistence of minority doctoral students can be identified, whether potentially successful minority doctoral students can be identified at the graduate entry level, and whether institutional practices that encourage or deter minority participation in graduate education can be determined. For Part I of the study, 63 persisting and nonpersisting doctoral students were interviewed regarding their experiences in graduate school; information about their personal and background characteristics was also collected. Identifying and locating an adequate number of nonpersisters (in order to make any meaningful comparisons) proved not to be feasible. The study was able to describe characteristics and experiences of persisters. Persisters in the study came from low socioeconomic backgrounds; showed a high degree of achievement in high school; had supportive major advisers; participated in professional activities while in graduate school; pursued the Ph.D. because of a desire for knowledge; and, in spite of wanting to leave the programs, completed the doctorate because they did not wish to experience failure.

For Part II of the study, 52 faculty and staff at six graduate institutions were interviewed to determine their policies and practices regarding minority doctoral students. It was found that the level of support for minority students varied greatly among institutions. Policies and practices that appear to encourage participation of minority students include an institution-wide policy regarding minority graduate students, coordination of services for minority students by an entity above the departmental level, early identification of minority applicants, special admissions arrangements, support services focused on minority students' needs, and efficient record keeping to monitor effectiveness of efforts.

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Part I

Personal and Background Characteristics of Persisting and Nonpersisting Black and Hispanic Graduate Students

Part I

PERSONAL AND BACKGROUND CHARACTERISTICS OF PERSISTING AND NONPERSISTING BLACK AND HISPANIC GRADUATE STUDENTS

Introduction

Minority groups--particularly Blacks and Hispanics--are greatly underrepresented in graduate and professional schools. Although minorities make up more than 16 percent of the population of the United States, they accounted for only 8 percent of the doctorates awarded to U.S. citizens in 1978-79. One of the reasons for this underparticipation is the high attrition rate of minorities at the high school and undergraduate levels of the educational pipeline. The high school dropout rate for Blacks is 28 percent, and that of Puerto Ricans and Chicanos is 45 percent, whereas that of Whites is about 17 percent (Commission on the Higher Education of Minorities, 1982). At the postsecondary level, research suggests that although 10 to 40 percent of all students who enter college will drop out before degree completion, for minorities the proportion is substantially higher, particularly in predominantly White schools (Astin, 1975; 1982; Astin & Burciaga, 1982; Cross & Astin, 1981). This disparity persists at the graduate level, where the dropout rate is 45 percent for Blacks, 52 percent for Chicanos and Puerto Ricans, and 41 percent for Whites (Commission on the Higher Education of Minorities, 1982).

Although literature on minority participation in, and attrition from, undergraduate education continues to grow, there have been few studies on the participation and attrition of minorities in postbaccalaureate education. Research is sparse on questions such as why minority graduate students drop out of school; how potentially successful minority graduate students can be identified while still in undergraduate school; and what are successful methods of recruiting greater numbers of minority students into graduate education. Identification of the most significant factors affecting success or failure of minority graduate students is an important step in understanding the problem of low persistence rates among minority graduate students.

Review of the Literature

There is a growing body of literature on factors affecting minority (particularly Black) retention at the undergraduate level. Most of these studies focus on factors relating to student characteristics and behavior as well as student experience. A smaller number consider the role of institutional characteristics. Given the dearth of research on minority retention in graduate education, it might be well to consider some of the studies of retention at the undergraduate level, particularly those that deal with the role of student characteristics and behavior. Boyd (1977) found that factors important for graduate enrollment and retention were usually the same as those for undergraduate retention: contact with faculty, financial support, and preadmission test scores.

Student Characteristics and Behavior

The National Longitudinal Study (NLS) has followed a sample of high school graduates from the class of 1972 and recently reported data collected in 1976 from the third follow-up of students (Eckland & Henderson, 1981). These figures show that while socioeconomic status affects dropping out, achievement is a much more powerful factor, for all races. Cross and Astin (1981) found that the most significant predictors for full-time persistence were students' past academic achievement as reflected by high school grades, SAT scores, college preparatory curriculum, and attendance at a four-year college. Astin (1982) identified a number of entering student characteristics that are predictive of undergraduate persistence, including good high school grades, well-developed study habits, and high self-esteem in terms of academic ability.

Research suggests that there are differences between minority and White students that affect their performance on campus. Attitudes, aspirations, and expectations with which students enter college may vary among subgroups and affect academic performance (Minatoya & Sedlacek, 1983; Shaffer, 1973). Gutierrez (1981), in comparing Hispanic and White students, found differences in self-esteem and perceived treatment by teachers. Psychological factors such as self-concept, negative perceptions of college, feelings of dissent, and militancy have been seen as contributing to retention or attrition of Black students (Fleming, 1981; Peterson, 1973). Since predictors of success for majority students may be inappropriate for minorities, Sedlacek and Webster (1978) have suggested the following noncognitive predictors of students' persistence: positive self-image, understanding of racism, realistic self-appraisal, ability to formulate long-range goals, availability of a support person, leadership experience, and community service.

Students' Experience and the Educational Environment

The experiences that students have while in the college setting are also important factors that affect persistence. These experiences may be closely tied to the college environment and its effect on the student. Braddock (1981), using the Tinto (1975) model, found that student characteristics were responsible for only a small proportion of the variance in dropout propensity among Black students at predominantly White institutions, but that low environmental congruence led to withdrawal. A number of studies found that feelings of alienation and not belonging on a campus contributed to minority attrition (Bean & Hull, 1984; Burrell, 1979; Edmonds, 1984; Suen, 1983). A positive racial environment on a campus is associated with good academic performance and persistence (Allen, 1981; Bennett & Okinaka, 1984).

Astin (1982) also looked at the effect of institutional quality and certain environmental characteristics on minority persistence. He found that the characteristics that facilitate persistence are attending a four-year college or university, living on campus rather than at home, having financial aid in the form of grants or scholarships, not having to work at an outside job, majoring in education, and attending a relatively selective or prestigious institution. Centra (1970), in a study of Black students at predominantly White colleges, documented the need for Black students to have more contact with faculty as a way of encouraging persistence.

Factors Influencing Minority Retention at the Graduate Level

As mentioned above, there has been little research on factors that affect minority retention at the graduate level. The most comprehensive treatment thus far of minority participation in graduate education is the National Board on Graduate Education's 1976 report that analyzes the issues and outlines the conditions relevant to eliminating the barriers to access to graduate education for minority group members. It also includes specific policy recommendations directed to the federal government, other agents and agencies, and the general public.

Most of the studies relating to minority graduate education concern the status of minority groups in graduate education, the demographic and enrollment characteristics of the minority pool, personal and background characteristics of minority graduate students, and institutional characteristics and practices that affect minority students at the graduate level. Because Part I of this study deals with the personal and background characteristics of graduate students and their educational experiences, the remainder of this literature review will focus on this area, even though few of these studies examine the relationship between student characteristics and experiences and attrition or retention. Part II looks at some studies of institutional characteristics, policies, and practices as they affect minority students at the graduate level.

Background characteristics of minority graduate students.

Noboa-Rios (1982) surveyed Hispanic doctoral recipients to identify important variables related to success in graduate school. The survey elicited information on socioeconomic and schooling backgrounds of doctoral recipients and outlined trends in doctoral attainment within and across Hispanic ethnic groups. One of his findings was that background characteristics and the educational upbringing of Hispanic respondents resemble more closely those of lower-socioeconomic Hispanic undergraduates than those of White undergraduates. According to Noboa-Rios, the differences that distinguish the potential Hispanic college dropout from the Hispanic doctoral degree recipient are general aspirations and certain personal attitudes toward school achievement. The latter had high aspirations toward success in school. High school accomplishments also proved to be major indicators of later academic success. This study concludes that the most significant factors related to level of educational attainment among Hispanic recipients of the doctorate are family child-rearing practices, type and quality of secondary education, and immigrant status.

Mommsen (1974) attempted to survey all living Black American doctorate recipients to determine, among other things, their representation in the various disciplines and their experiences with discrimination in graduate school. He found that Blacks with doctorates were most overrepresented in education and highly underrepresented in the physical sciences. Two-thirds of his sample felt that discrimination was prevalent at their universities.

A comprehensive survey of Black, Mexican American, Puerto Rican, and Native American Ford Foundation fellows (Arce & Manning, 1984) looked at characteristics, experiences, and career paths of recipients of doctoral fellowships between 1969 and 1981 to assess the needs of, and conditions facing, minorities in American higher education. The survey questions represented the following categories: personal and background variables, personal problems, structural problems, and structural integration. The study found that the array of variables measured was not strongly related to degree of attainment or academic success, but that relationships were stronger for reports of experiences reflecting barriers to integration into academic life than they were for purely personal factors and background.

Enrollment decisions of minority graduate students. A number of studies have examined the graduate aspirations of Black undergraduates, as well as their choices of field of study. Baird, Hartnett, and Clark (1973) surveyed 21,000 undergraduates to ascertain, among other things, their educational aspirations, after-graduation plans, reasons for furthering or not furthering their education, and experiences involved in applying to graduate schools. The survey found differences between Whites and Blacks in choice of field of study, intention to continue on to graduate school, and reasons for not continuing their education. Although a slightly higher proportion of Black than White college seniors planned to continue on to graduate or professional school, those Black seniors who did not gave financial difficulty as their major reason (as opposed to Whites, who were simply tired of being students). In following up this survey, Baird (1974) found that most of the Black students who did not further their education cited financial difficulty as their reason for not doing so. Centra (1979) also found that Black and Hispanic/Indian GRE test takers had higher degree aspirations than did White or Oriental students with similar characteristics. In a study of application and acceptance patterns of GRE examinees Baird (1982) found that minority students tended to apply to fewer departments than Whites, and were accepted (by at least one department) less often than Whites. In a study of GRE examinees' perceptions of the importance of admission factors, Powers and Lehman (1982) found differences between Blacks and Whites regarding their perceptions of the importance of admissions criteria, especially GRE test scores, with Black examinees considering the scores more influential than did White examinees.

Graduate school experiences of minority graduate students. A number of studies have surveyed graduate and professional students regarding their experiences in graduate school, including peer relationships, faculty relationships, racism, financial assistance, and feelings of isolation and alienation (Allen, Haddad, & Kirkland, 1984; Carrington & Sedlacek, 1976; Duncan, 1976; Green & McNamara, 1978). All have reported that minority graduate students experience feelings of isolation and alienation at their institutions as well as difficulty in establishing relationships with White faculty.

The establishment of a mentor relationship has been cited as one of the important features of the graduate experience. Hall and Allen (1982) found that students' perceptions of greater opportunities for establishing mentor relationships were influential in raising achievement levels. In his study of the availability to Black graduate and professional students of academic mentoring and access to an "old-boy networking" system, Blackwell (1983) found that Blacks in graduate and professional schools seldom receive special protege-type personal guidance from their professors.

Purpose of the Study

The study was primarily a feasibility study to test whether factors influencing persistence and nonpersistence of minority doctoral students can be identified, whether potentially successful minority doctoral students can be identified at the graduate entry level, and whether institutional practices that encourage or deter minority participation in graduate education can be determined. The research was seen as a first step toward answering the following questions:

- What are the personal and background characteristics and experiences of persisting Black doctoral students? Are they similar to the characteristics of persisting Hispanic doctoral students? What personal factors, background characteristics, and experiences distinguish persisting from nonpersisting students? How does choice of discipline or type of institution bear on success in graduate school for Blacks and Hispanics?

- What events, experiences, strategies, and actions do persisting Black and Hispanic graduate students consider most responsible for their success in entering and persisting in graduate education?

- What, in the experience of nonpersisting Black and Hispanic graduate students, have been the major deterrents to continuing graduate education?

- What institutional policies or practices appear to encourage or deter minority participation in graduate education?

- What techniques, procedures, and methods are most successful in acquiring data to answer the above questions? Are these questions answerable at all in a generalizable way?

Part I of this report addresses the first, second, third, and fifth questions. Part II will address the fourth question.

Method

The Sample

Six graduate institutions agreed to participate in this study. They were chosen because of their proximity to Educational Testing Service, and because they represented different types of institutions. Three are private institutions, two are public, and one is a historically Black institution.

All institutions that were approached agreed to participate. Primary contact was made with the graduate deans (or their equivalents), who then designated contact persons, usually assistant or associate deans. The participating schools supplied lists with the names, addresses, and telephone numbers of persisting and nonpersisting doctoral students* from the humanities, social science, and biological/physical sciences disciplines during the past ten years. The schools also wrote to the students they had identified to inform them that they would be contacted by project personnel and to urge them to participate in the interviews. Wherever possible, we attempted to work with the same departments across institutions (for example, in all but one case the social science discipline was represented by the psychology departments at the participating institutions). This was not always possible, however, because of low enrollments of minority doctoral students at some schools in some disciplines.

The graduate schools identified 84 potential participants—59 persisters and 25 nonpersisters. Letters addressed to 10 of these (9 were nonpersisters) were returned because the addressees had not left forwarding addresses. One addressee (persister) was deceased; one was out of the country (persister); and we did not have any contact with six (all nonpersisters). Three persons who were contacted (two persisters and one nonpersister) refused to participate, and 63 completed interviews. The distribution of interviewees according to discipline and status is given below. Sex and ethnic breakdowns are given in the "Findings."

54 Persisters:	9 Nonpersisters:
16 - Humanities	2 - Humanities
21 - Social Sciences	6 - Social Sciences
17 - Sciences	1 - Sciences

Limitations of Sample

The original research design had called for 36 nonpersisters and 62 persisters. The study interviewed 9 nonpersisters and 54 persisters. We were unable to reach our goal for three reasons: (1) Severe underrepresentation of minorities at the doctoral level in all disciplines, but especially in the sciences. Some institutions could not identify more than three minority persisters in a particular science discipline within the past 10 years. (2) Lack of up-to-date information on nonpersisters. In some cases, institutions could not identify nonpersisters; in others they did not have recent addresses or telephone numbers. (3) Reluctance of nonpersisters to be interviewed. We assume that since some of the nonpersisters did not respond to our letters, they did not wish to talk about their experiences in graduate school.

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* A persister was defined for purposes of this study as any student who was at the dissertation stage in a doctoral program (and who had already passed the comprehensive exams) or one who had already attained a doctorate. A nonpersister was a student enrolled in a doctoral program but who had not been registered for at least a year at any point prior to comprehensive exams or who had not been registered for at least one year after having failed the comprehensive exams.

The Instrument

The interview schedule contained questions based on factors that the literature on minority retention had identified as influencing persistence or that the researchers felt might be important:

- SES/Demographic Information
- Educational Background and Experiences in
    - High School
    - Undergraduate School
    - Doctoral Program
- Work Experience
    - Predoctoral program
    - During graduate school
    - Postdoctoral program
- Factors Influencing Decision to Enter Higher Education
- Factors Influencing Persistence
- Feelings about Graduate School Experiences and Worth of Doctorate
- Recommendations for Changes in Institutional Policy to Increase the Access and Retention of Minority Doctoral Students

Interviews with persisters and nonpersisters took approximately one and a half hours. Many of these were taped. There was a training session for interviewers to ensure maximum effectiveness in eliciting useful information. On the whole, interviewees were remarkably candid in their responses.

Analysis of Data

After reviewing the interview notes, we found most of the responses to be codable, with the exception of those to questions concerning policy changes. It was, therefore, possible to obtain frequency counts for many of the items on the instrument. Given the low number of nonpersisters, any statistical analysis of differences between persisters and nonpersisters would be invalid. Consequently, only the findings concerning persisters are presented.

Findings

This was primarily a feasibility study to test whether the research questions posed earlier can be answered by the methods used in the study. That is, can interviews of persisters and nonpersisters yield information regarding factors that affect their persistence in graduate school as well as descriptions of their demographic and educational background, experiences, and behavior?

This pilot project has shown that the above information can be obtained for persisters, but that it is not feasible to identify and locate sufficient numbers of nonpersisters to provide any kind of meaningful comparison between the two groups. Problems involved in conducting this research are discussed further in the "Discussion."

In view of the small number of nonpersisters for whom data are available, this report focuses on characteristics and experiences of persisters rather than on differences between the two groups. This section presents a profile of the persisters who participated in the study and considers the characteristics and experiences of this group as they relate to persistence in graduate school.

Demographic and Educational Backgrounds and Experiences of Respondents

Personal Characteristics of Interviewees

Persisters. Fifty-four persisters were interviewed. Of these, 24 were male and 30 were female. Forty-five (83 percent) were Black and nine (17 percent) were Hispanic. (Mexican Americans, Puerto Ricans, and Latinos were all classified as "Hispanics" for purposes of this study.) In view of the small number of Hispanic students and the fact that very little difference was found between responses of the Hispanic and Black persisters who were interviewed, data for each group will not be presented separately. Persisters ranged in age from 27 to 59 years, with more than half (65 percent) between 28 and 38. Forty-six percent of the persisters were single during their doctoral education, and 54 percent were married.

Profile of the Persister

Family background characteristics. Ninety-eight percent of the persisters had siblings who had some form of postsecondary education, with 26 percent having obtained graduate degrees (Table 1). The majority of persisters' fathers (55 percent) had completed at least a high school or technical degree and 30 percent had some postsecondary education, but 39 percent of the fathers had not completed high school. Seventy-four percent of persisters' mothers had at least a high school or technical school degree, with 44 percent having some postsecondary education. Only 18 percent of persisters' mothers had not completed high school. Thirty-seven percent of the spouses of persisters who were married had completed a graduate or professional degree.

Most of the respondents (39 percent) had fathers who were the equivalent of skilled workers, factory workers or clerks (Table 2). Their mothers' occupations (46 percent) were equivalent to homemaker, farmer, or unskilled worker. Fifty percent of the respondents characterized the family's standard of living when they were growing up as "below average,"

Table 1

Education of Persisters' Family Members

	Father %	Mother %	Siblings %	Spouse % of those married (N = 35)
Graduate or Professional Degree	7	9	26	37
Some Graduate School	4	6	26	29
College Graduate	7	11	15	14
Some College	9	4	13	6
Technical Degree (Postsecondary)	2	15	7	6
High School	26	30	2	6
Less than High School	39	18	—	3
Unknown	5	7	11	—

Table 2

Persisters' Parents' Occupation

	Father %	Mother %
Professional, Manager, Owner	30	36
Skilled Worker, Factory Worker, Clerk	39	15
Farmer, Homemaker, Unskilled Worker	26	46
Unemployed, Deceased	—	—
Unknown	6	4

while 39 percent described it as being "average" (Table 3). Forty-five percent described their family's socioeconomic status as "working class or lower class," while 31 percent said that it was "lower middle class" (Table 4).

Table 3

Standard of Living of Persisters' Families

	% Responses
Far Above Average	2
Above Average	7
Average	39
Below Average	50
Far Below Average	--
Don't Know	2

Table 4

Socioeconomic Status of Persisters' Families

	% Responses
Upper Middle Class	4
Middle Class	30
Lower Middle Class	17
Working Class or Lower Class	43
Don't Know	6

High school experience. Almost three-fourths of persisters (72 percent) had attended public high schools; 50 percent were in graduating classes of 250 to 500 students. The racial composition of the high schools was predominantly White for 48 percent of the respondents and predominantly Black for 37 percent. Seventy-six percent of the persisters were enrolled in college preparatory programs in high school. The grade point average of half the respondents was the equivalent of a B, B+, or B-. Another 39 percent had a grade point average of A, A+, or A-. Sixty percent of the persisters were ranked in the top 20 percent of their classes. Of the 50 percent who received counseling in high school, the majority, 55 percent, were counseled in college selection or a combination of college selection and financial aid, career planning, academic, and personal advice.

Sixty-seven percent of the persisters did not participate in special programs in high school. However, of the 33 percent who did, 70 percent were in gifted student programs. Ninety percent participated in extracurricular activities, with 61 percent participating in more than one activity.

Undergraduate education and experience. Most persisters attended predominantly White public undergraduate institutions (Table 5). The majority of persisters (60 percent) financed their undergraduate education through a combination of work, family assistance, loans, scholarships, and financial aid. Thirteen percent were financed solely by scholarships. Half had no undergraduate debt, while 25 percent had an undergraduate debt of $1,000 to $2,500 (Table 6). Sixty-five percent worked part time, and 15 percent worked full time. Of those who worked, almost half (46 percent) worked 11-20 hours per week. Sixty-three percent had Black or Hispanic professors during their undergraduate experience. The cumulative grade point average of most (43 percent) was 3.5 or over on a 4.0 scale.

Graduate school education and experience. Eighty-one percent of the persisters were enrolled full time in their doctoral programs. Fifty-two percent had applied to one graduate institution; 33 percent applied to between two and four schools. Sixty percent were accepted at one institution and 36 percent at between two and four institutions. The reason for selecting schools to which to apply was, for the majority (56 percent), the fact that they had previously attended those institutions. When asked what was their most important reason for choosing the school in which they enrolled, most (28 percent) again responded that it was their previous attendance. One woman explained: "It was the quickest way to complete my education. I could remain in a system in which I was known and felt comfortable." Respondents also believed overwhelmingly (75 percent) that the most important factor affecting acceptance into their doctoral programs was their past academic performance. Some felt that it was a combination of "being a minority and a competent scholar."

Twenty-six percent of the persisters were supported solely by graduate fellowships, 15 percent solely by teaching assistantships, 8 percent by graduate research assistantships, and 6 percent by traineeships. The second most common type of support (for 20.6 percent) was the combination of a graduate fellowship with one or more of the other types of support. Fifty-five percent of the respondents felt that they did not receive full support. Of these, 25 percent subsidized their education through loans, and 32 percent by working. The majority of persisters (60 percent) owed nothing for their education by the time they left school.

Table 5

Type of Undergraduate Institution Attended

Predominantly White Public	Predominantly White Private	HBC Public	HBC Private
37%	29%	10%	24%

Table 6

Indebtedness of Persisters for Undergraduate Education

	% Responses
None	50
Less than $1,000	7
$1,000 - $2,500	24
$2,501 - $3,500	7
$3,501 - $4,500	4
$4,501 - $5,000	4
Over $5,000	2
No response	2

Asked why they chose their major advisers, 62 percent said that they did so because the advisers were working in similar specialty areas. Most (45 percent) said that their major advisers had been "very supportive," while 35 percent said that they had been "supportive." One persister described her adviser as "sort of a father figure. He really helped me along." Another credited her adviser (who was Black) with providing "emotional, academic, and moral support throughout my time in the program." Only 13 percent felt that their major advisers had not been supportive. Seventy percent had major advisers who were not minorities, but 52 percent had Black or Hispanic instructors in their doctoral programs. When asked whether anyone else at their institutions had helped them complete their degrees, 60 percent responded affirmatively. Of these, 60 percent said that this person had been a minority--some mentioned the minority affairs officers at their institutions or minority professors. Eighty percent of the persisters felt that their families had been supportive. "Everyone in my family got my Ph.D. with me," said one woman who described the extraordinary efforts of her family to provide emotional and practical support.

Asked whether they had published papers or given presentations at professional meetings while in the doctoral program, 30 percent said that they had done neither; 24 percent had made presentations only; 24 percent had done both; and 20 percent had published only.

Experiences relating to work. Fifty-four percent of the persisters had been working just before entering the doctoral program, while 40 percent had been students. Fifty-eight percent of those who worked felt that their jobs had been an influence on their entering a doctoral program. Fifty-six percent had jobs while pursuing the doctoral degree, with 43 percent working 11-20 hours per week. When asked whether their jobs were related to their program of studies, 45 percent of those who worked said "yes."

Fifty-seven percent now have a job, and of these, 40 percent are teaching. Sixty percent have jobs in the same fields as their majors, and 78 percent admitted that a doctorate was required or recommended for their jobs. Sixty-three percent said that their major advisers or schools had not helped them to get their present jobs.

Factors influencing decision to pursue higher education. Fifty-seven percent decided to study for a doctorate because they wanted more knowledge or expertise in their field (one persister said he was motivated by a "thirst for knowledge"), while 42 percent gave as a reason the fact that a doctorate was required for job advancement.

Regarding their decision to go to college, persisters cited two main reasons: the unattractive job prospects without a degree (39 percent) and their parents' expectations (38 percent). "I just couldn't figure out how to get what I wanted without a college degree," said one respondent. "I didn't want day laborer jobs and felt that they or something equally dead end were the only options available unless I achieved a higher level of education." Fifty-nine percent said that those who most influenced their desire to go to college were their parents. "My parents always expected me to go to college," said one persister. Another said, "My father was very interested in education and wanted all of his children to go to college."

Feelings regarding the doctorate and experiences while in the program. Twenty-six percent of the persisters had no expectations regarding the doctoral program before entering it, while 31 percent felt that it would be difficult. Fifty percent felt that their expectations at the time of entering the doctoral program had been inaccurate ("I didn't expect the school to be so indifferent to students"). Sixty-one percent admitted that there were times when they had wanted to leave the program, and 30 percent of these gave as a reason "strains on family/personal relationships." When asked why they had remained in their programs, 30 percent replied that "personal satisfaction, not wanting to experience failure" made them stay, while 60 percent mentioned this in combination with other factors.

When asked whether the doctorate had "paid off" for them, 61 percent replied affirmatively. Sixty percent of these cited "personal satisfaction" in having completed the degree as a reason for their reply. "It has given me a tremendous sense of accomplishment," said one respondent. "It has given my students an incentive to pursue those things that they see as being beyond their grasp." Eighty-one percent of the persisters felt that they had made sacrifices to attain the degree. When asked what types of sacrifices were made, they most frequently (65 percent) mentioned those relating to family or personal relationships. Some persisters expressed the fear that they had lost touch with their families during their time in the programs. Some explained that their marriages had broken up because of the tremendous strain imposed by "having to work on a doctorate and hold down a job at the same time." However, 82 percent felt that the sacrifices were worth it. Seventy percent of the persisters felt that their experiences in the doctoral program had been positive: "I grew as a person. I learned a lot about myself as well as about my subject." "I made my closest friends while [I was] a doctoral student, and became part of the scientific community. I developed intellectually."

Students' responses regarding factors that had affected their persistence in graduate school are given in Appendix A. Their recommendations for institutional changes to increase access and decrease attrition are also included in Appendix A. Appendix B gives persisters' advice to entering minority graduate students about enrolling and persisting in graduate school.

Discussion

The persisters who participated in the study resemble in many ways the typical minority doctorate degree recipient as established in the literature in terms of their family background characteristics, their achievement in high school, and their graduate school experiences.

Family Background Characteristics

Persisters' parents' educational attainment is similar to that reported by others (Allen, Haddad & Kirkland, 1984; National Board on Graduate Education, 1976; Pearson, 1984). This level of educational attainment is somewhat higher than the national figures for Blacks and Hispanics, but lower than the educational attainment of parents of White doctorate recipients.

Data for persisters show a relatively low educational level for parents (compared with the parents of White doctorate recipients), with siblings and spouses having attained much higher levels of education. The data also show that the majority of parents had occupations at the blue collar level or lower. At least half the persisters also considered their families' standard of living when they were growing up to have been "below average." This seems to indicate that although socioeconomic status and parental level of education and occupation were somewhat low, there was a strong emphasis on the value of education within the family.

Other research has found a poor relationship between family background characteristics and degree attainment (Arce & Manning, 1984; Noboa-Rios, 1982). Noboa-Rios, in fact, found that family child-rearing practices were more important factors in doctorate attainment than the educational level of parents. Hispanics in his study who attained the doctorate had parents who were supportive, who encouraged their children to achieve in school, and who had high expectations of their children's performance. The persisters in this study credited their parents with being the persons who most influenced their decision to go to college. This suggests that the persisters might have had parents who encouraged, supported, and motivated them to seek a higher level of education.

High School Achievement

Persisters show a high degree of achievement at the high school level. This is consistent with research that shows high school achievement to be a strong indicator of success in higher education (Astin, 1982; Noboa-Rios, 1982).

Graduate School Education and Experience

The graduate school education and experience of persisters in the study also show them to be similar to other minority students who attain the doctorate. Their pattern and rates of progression from undergraduate school through the completion of the doctorate are similar to national figures for Blacks, with the exception of the transition from undergraduate to graduate school (Table 7). The persisters in this study tended to enter graduate school immediately after obtaining their undergraduate degree instead of waiting 1.4 years, as did the typical Black Ph.D. (National Board on Graduate Education, 1976).

The majority of persisters gave previous attendance as a reason for selecting schools to which to apply and choosing schools to attend. Conventional wisdom might suggest that previous attendance at a school increases a student's retention since familiarity with the system, support networks, and relationships with the faculty have already been established.

Persisters reported that it was their past academic performance that actually got them into their doctoral programs. This response may indicate greater self-confidence in their academic ability, a quality that has been related to success in completing graduate school (Duncan, 1976). One persister said, "I had excellent credentials." Another maintained, "I was the best in my class. They would have been crazy not to admit me."

The relationship with the major adviser is an important element in a doctoral education. The degree of support and interest shown by the major adviser is crucial to the successful completion of a doctorate (Arce & Manning, 1984; Duncan, 1976). Persisters in this study stated overwhelmingly that their advisers were supportive. Furthermore, they also credited at least one other person at the institution for having helped them to complete the degree. This supports the contention that a support network is needed at the institution as an aid to minority retention (Blackwell,

Table 7

Progression in Higher Education
(Median Number of Years)

	Baccalaureate to Doctorate Entry	Baccalaureate to Graduate School	Graduate School Entry Doctoral Completion	Years to Doctoral Program to Completion
Black* Noneducation Doctorate	10.2	1.2	8.7	6.0
White* Noneducation Doctorate	7.6	1.1	7.1	5.8
Persisters	10.0	0.0	8.0	6.0

* Source: National Board on Graduate Education, 1976.

1983; Duncan, 1976). The fact that the majority of these support persons were minorities confirms the need for minority faculty and staff as sources of support at graduate institutions (Blackwell, 1983; Carrington & Sedlacek, 1976; Duncan, 1976). One persister said of the faculty at her institution: "Some instructors were horrible--just plain nasty. I was not given any support at all from the faculty, but the minority affairs officer at my school encouraged me and gave me support."

Student participation in professional activities is another important indicator of integration into and success in a graduate program (Allen, Haddad, & Kirkland, 1984). Almost three-quarters of the persisters had presented papers, published articles, or done both.

Although most persisters confessed to having wanted to leave their programs, they also overwhelmingly stated that it was their unwillingness to experience failure that kept them in school. This suggests a determination to succeed against all odds, which may well be a personal quality that helps students to persist. One persister said he stayed in the program because "I really wanted that degree. I really like to face up to a challenge." Another stated: "I refused to give up. I just grit my teeth and went on."

The fact that persisters pursued the Ph.D. because of a desire for knowledge is a comment on this group's love of their fields of study. Perhaps those who love their subject areas are more motivated to stay in the doctoral program than those who have more practical reasons for pursuing the doctorate. "Learning is exciting," explained one of the persisters. "There's magic for me in learning." Characteristics and experiences of persisters in the study appear to be similar to those of other minority students who have attained the doctorate.

Feasibility of the Study

This study was orginally conceived as a feasibility study because several difficulties were foreseen in conducting research of this type. These difficulties and the manner in which they were or were not resolved will be discussed in the remainder of this section.

Overcoming Regulations Concerning Confidentiality

The researchers expected to encounter difficulties in obtaining students' names and addresses from participating institutions. This, in fact, was not the case. Once institutions agreed to participate, they readily furnished this information as soon as they were assured that the identities of both institutions and students would be kept confidential.

Identifying Persisters and Nonpersisters

Identification of students by race. Some institutions did not request information regarding students' racial identification, believing this to be illegal. Instead, they relied on other indicators of race, such as surname and undergraduate college, to identify minority students. Needless to say, this is not the most efficacious means of identifying students by race; it is possible that minority doctoral students at some institutions were underreported because of this practice.

Identification of nonpersisters. There were two problems here: (1) distinguishing between a "nonpersister" and a "stop-out" and (2) obtaining the names of nonpersisters. Some schools automatically consider students to have dropped out once they fail to register within a certain period of time. Others allow students to attend sporadically over a period of several years before considering them dropouts. Furthermore, many institutions do not maintain records on students who leave the system and never return. They just drop their names from the list of students, and these names, once dropped, are difficult to retrieve.

Time factor. Because not all institutions keep up-to-date records on students, a timely response to a request for names and addresses may be difficult to obtain. At least two of the six institutions in this study took over six months to compile complete lists of students. (One institution had a manual record-keeping system.)

Identifying and Locating Adequate Numbers of Persisters and Nonpersisters

Low minority enrollment in the humanities and the sciences was also responsible for the low numbers of participants. Although the graduate institutions were chosen because they were located in areas with large minority populations and had relatively high minority enrollments, it was still not possible to identify sufficient numbers of students in the same disciplines (not to mention the same departments!) across institutions.

The situation was worse for Hispanic students, who are represented at even lower rates than Black students. The problem was compounded for nonpersisters by the difficulty in distinguishing between nonpersisters and stop-outs and by out-of-date locater information on this group. In a few cases, it was necessary to work with two departments in a particular discipline in order to obtain more participants.

A further complication was introduced by the fact that since the interviews were administered in person, participants had to be located within a reasonable range of the project site. This eliminated any people who did not live in the Northeast and further reduced the number of interviewees.

Tracking Down Potential Participants

At least 30 percent of the persisters and 75 percent of the nonpersisters were not at the addresses furnished by the institutions. We spent considerable time and effort tracking down participants, and it was easier to find persisters than nonpersisters, who tended to move more frequently without leaving forwarding addresses. For example, of the letters returned because of lack of a forwarding address, only one was from a persister whereas nine were from nonpersisters.

Of the 25 nonpersisters who were identified by graduate schools, we were unable to interview 16 for the following reasons:

Letter returned——no forwarding address	9
No response to initial or follow-up letter	6
Refusal to participate	1

Refusal to Participate

There were three outright refusals to participate in the project——two from persisters and one from a nonpersister. For the six nonpersisters with whom we were unable to establish contact, it was impossible to determine whether this was due to their refusal to participate or to other factors. Compared to the difficulties mentioned above, however, students' refusal to participate was not a major problem.

Conclusion

The major difficulties involved in conducting this study were: (1) obtaining sufficient numbers of minority doctoral students in certain disciplines such as humanities and science; (2) obtaining an adequate representation of Hispanic students; (3) identifying and locating nonpersisters. This last was the major problem encountered in the study and could not be overcome.

In a future study of this type, the first problem might be overcome by expanding the number of institutions. A study, for example, that included a larger number of graduate schools might be able to identify more minority doctoral students in the humanities and the sciences. The second problem, low number of Hispanic students, might also be prevented by including more institutions, especially if the institutions are located in areas with large Hispanic populations, such as the West and Southwest. The last and most serious problem, identifying and locating nonpersisters, seems to be insurmountable. We do not feel, based on our experiences in this project, that it is possible to identify, locate, and persuade nonpersisters to participate in a study of this type without an unreasonable investment of time, money, and effort.

Recommendations

Policy Recommendations

This study found the following to be characteristics and experiences of minority students who attain the doctorate:

- Their parents' level of education and occupations are low and the family socioeconomic status below average, but the educational level of their siblings is high.
- Their parents were influential in encouraging them to seek a higher level of education.
- They were high achievers in high school.
- They chose graduate institutions in which they had been enrolled previously.
- They have confidence in their academic ability.
- Their major advisers were supportive.
- There were other persons at their institutions who were supportive.
- They participated in professional activities while in graduate school.
- Although there were times when they wanted to leave the programs, they stayed because they do not like to fail.
- They pursued a Ph.D. because of a love of learning and a desire for knowledge.

Although the number of persisters interviewed as part of this study was small, their characteristics and experiences resemble those of minorities who have successfully completed a doctorate, as described in other studies. These findings suggest the following policy recommendations to assist minorities to participate in and complete a graduate education:

- Since high school achievement is such a strong indicator of successful completion of graduate education, efforts to identify, counsel, motivate, and assist promising minority students to pursue graduate education should begin at the high school level.

- A supportive major adviser and a support network in graduate school are important aids to retention of minority students. Policies that encourage the formation of a positive relationship with a major adviser and the establishment of a strong support network will help to increase retention.

- The presence of minority faculty and staff in a graduate institution enhances the supportive atmosphere for minority students. Graduate institutions should make every effort to hire minority faculty and staff.

- Minority graduate students are known to experience feelings of alienation and isolation in graduate school. Their participation in professional activities and research projects is one indicator of their integration into departmental life. Policies to encourage such activities at the departmental level would aid retention.

Recommendations for Further Research

There is a need for a larger scale study of the characteristics and experiences of minorities who have attained a doctoral degree. This study should survey minorities who have completed the doctorate within the last 10 years and could include questions used in the present study. As in the present study, institutions could be asked to supply names and addresses of recent minority graduates. A larger scale survey would provide a broader base for conclusions regarding characteristics and experiences of successful minority doctoral students; it would also look at differences between ethnic groups. Ideally, such a project should include a survey of unsuccessful doctoral students, but, as our study has shown, this is not feasible.

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Appendix A

Factors Affecting Persistence

Institutional Changes to Increase Access and Decrease Attrition

Factors Affecting Persistence

Both persisters and nonpersisters were asked specific questions concerning factors that had affected their persistence in graduate school.

Question for Nonpersisters: What factors contributed the most to your leaving the program?

Respondents' replies fell into two categories—external factors and internal factors. Among the external factors given were an unsupportive dissertation committee, financial hardship, a hostile educational environment, an unhealthy learning environment, family responsibilities, and an ineffective adviser. Internal factors included lack of discipline, indecisiveness about career goals, lack of motivation, and lack of self-confidence.

Question for Nonpersisters: What was the single most important factor?

One respondent stated that it was the lack of structure in the program. Other responses were: "lack of self confidence," "lack of motivation" and "financial difficulty."

Question for Persisters: What factors contributed most to your persistence in graduate school?

Responses fell into the following categories: personal reasons, such as determination, unwillingness to experience failure, self-confidence, clear goals, hunger for knowledge, obligation to self and family, desire to be a role model for minorities; external reasons such as institutional support systems, family support, and financial support.

Question for Persisters: Of these factors, which was the most important in keeping you in graduate school?

Persisters overwhelmingly cited unwillingness to experience failure as the most important factor. Others mentioned the support system, financial support, and "a challenging research project."

Institutional Changes to Increase Access and Decrease Attrition

Respondents were asked to indicate institutional changes they would recommend to increase access and decrease attrition of minority graduate students.

To Increase Access (Nonpersisters)

While one nonpersister indicated that institutions tended to make only superficial changes, so his recommendations would do no good, the others had these suggestions:

- Offer more financial support and more counseling.
- Hire more minority professors to serve as role models.
- Schools should financially support a Black graduate student organization. Students need peer contact and support.
- Professors should be sensitized to the needs of minority students.
- Minority students should be given lots of feedback on how they are doing and be well informed of what the requirements are.

To Decrease Attrition (Nonpersisters)

- There is a need for more counseling.
- There is a need to determine exactly what kinds of problems confront minority students in graduate programs.
- More sources of financial aid should be provided.
- Provide leaves of absence or more program flexibility so that students can deal with family pressures or clarify their goals.
- Recruit and hire professors who are supportive of minority students.

To Increase Access (Persisters)

Suggestions of persisters fell into several categories:

Changes at the Undergraduate Level

- More academic counseling is needed at the undergraduate level.
- Minorities are not being equally prepared for graduate school in undergraduate colleges and universities.
- Improve college counseling so that students know exactly what level of work is needed and how to negotiate the system.
- Seminars and workshops at the undergraduate level are needed to dispel some of the myths of graduate education.

Changes in Recruitment and Admissions Practices

- Actively recruit minority students and inform them of funds available for graduate school.
- Increase recruitment efforts at Black colleges.
- Start recruitment efforts earlier than the undergraduate level.
- Admit students who have less than a 3.0 but who have the interest. Institutions must rely more on the noncognitive qualities and experiences of minority students and less on standardized test scores.
- Establish firm relationships with minority feeder schools. Exchange programs could be implemented during undergraduate years so minority students can get a feel for and become known by faculty at prospective graduate schools. Use minority students as recruiters. Send brochures to minority student organizations.

Changes in Financial Assistance

- Increase the sources and types of financial aid so that students can afford to enroll in graduate programs without the added demands of a job.
- More foundations should get involved in providing funds to institutions or students.

Changes in Support Systems and Environment

- Improve the support systems for doctoral students.
- Create an environment wherein more dialogues are conducted among students or between students and faculty.
- Establish support groups for students to permit a sharing of experiences and a sense of belonging.

Changes in Faculty

- Hire more minority faculty. There is a need for more role models.
- Faculty should be more sensitive to the multiple roles minority students must play. These students tend to pursue doctoral programs as older students and as full-time employees. They bring to the program a wealth of experiences and have expectations different from those of younger students.
- Create an atmosphere of trust between faculty and students.
- Improve the monitoring of mentors. Make them accountable for students' progress.
- Conduct sensitivity sessions for faculty. Help faculty to recognize that minority needs may differ from those of the White population.

Changes in the Curriculum

- Offer classes in the evenings or on weekends to accommodate working students.
- A less traditional focus is required. Programs need to incorporate student work and other experiential learning experiences.
- There should be more of a multi-ethnic dimension in the curriculum. Curricula need to be changed to be more reflective of the pluralistic society in which we live.
- Teach research methodologies in a practical sense. Present them in a less abstract fashion.
- Provide test-taking workshops.

To Decrease Attrition (Persisters)

Suggested changes were similar to those given above.

Changes Below the Graduate Level

- Overall improvement in the educational system must start before graduate school. Increase the aspirations of minority students at the elementary and high school levels.

- Provide career counseling at the high school level regarding career options and the educational requirements needed for these options.

Changes in Progression Patterns

- There should be a concerted effort to encourage minorities to enroll in doctoral programs immediately after completing the master's degree. Work at the master's level opens slightly the door for intellectual pursuit; the process is completed only with work at the doctoral level and beyond. If the theories taught in the master's program were tied more closely to the research work conducted in the doctoral program, students would be more prone to see these as part of a continuum and more inclined to stay in school throughout the doctoral process.

Changes in Financial Assistance

- Provide more financial assistance, assistantships, and fellowships. It is difficult to work and to pursue a graduate degree at the same time.

Changes in Support Systems

- Establish support groups for minority students. Initially, students would be teamed up with someone who has been in or through the program. Matching alumni with students would also afford the opportunity to deal with feelings of being overwhelmed or alone.

- Increase student support services. Offer remedial courses, but make students aware that it is up to them to correct deficiencies. Provide better counseling.

- Encourage bonding among minority students. Recognize the need for an extra supportive environment.

Changes in Faculty and Staff

- Provide sensitivity training for faculty to help them identify and correct their biases.

- Encourage instructors to become more involved with their students. Professors should develop mentoring relationships with students.

- Assign students to professors early in their academic careers to help with adjustments and develop a research relationship.
- Faculty should develop a stronger sense of teaching and not immerse themselves so much in their research that they alienate students.
- Hire more minority professors or more faculty who can identify with minority students. Graduate faculty and the administration must not only be aware of minority needs but be informed of effective ways of dealing with the problems and needs of minority students.

Changes in Curriculum

- Mainstream minority and ethnic content into the programs.
- Offer more classes in the evenings to permit more part-time students to take classes.
- Give students with little or no work experience opportunities to engage in some cooperative work ventures to integrate academic studies into practical situations.

Appendix B

Persisters' Advice to Entering Minority Graduate Students

Persisters' Advice to Entering Minority Graduate Students

Persisters were asked, "Based on what you now know, what advice would you give a minority student about getting into and staying in a doctoral program?" Their responses are given below.

- It is not going to be easy. It is a very tough row to hoe, but it can be done and it is worthwhile. Be able to devote yourself to the program for three or four years. You have to have that drive.

- Try to link up with a minority professor if possible. Select a faculty member with whom you feel you could develop a good student/teacher relationship.

- You should not expect the faculty to reach out and be of great assistance to you just because you are a minority. Remember, it's just an institution and you can use it or it will use you.

- Know you are playing a game.

- Walk in there with confidence and not the color of your skin. To get in should be strictly a matter of academic qualifications. Do your best in undergraduate and graduate school. Staying in is a matter of having a good counselor, knowing exactly what is expected of you.

- Pursue the degree with as few other commitments as possible. Pursue the program as soon after undergraduate school as possible or, if that is not possible and you must go as a part-time student, be prepared for the difficulty of serving in several capacities. Be prepared to make adjustments, sacrifices, and compromises.

- Pursue a doctoral program only if you have a love of knowledge Don't do it just because it may increase financial standing— that goal may or may not be achieved. Know why you are pursuing the degree.

- Know your stamina and capacity to handle stress. Students must realize institutions don't owe them anything. The burden is on the students to get from the institution what they need to meet their goals. Students must be aware of what they will be dealing with (the program demands, formal and informal demands made by the institution). Get an accurate perception of yourself and what you will be undertaking.

- Establish a support network. Search out a staff person whom you can relate to personally and who can guide you through the maze. At the same time, hook up with other students who can provide peer support—don't attempt to go through the program alone. Get to know alumni as well as other fellow students.

- Don't get bogged down by the politics of the program and irrelevant demands. Get a mentor to show you how to negotiate the system. Learn the pecking order and adhere to it. Learn to respect authority; don't be defiant.

- Keep a psychological and physical distance from negative people. You will need constant encouragement, not obstacles. Find someone on campus with whom you can relate on a personal basis. Become involved in a student support group. Maintain a close contact with other students in the program to dispel feelings of isolation and anxieties.

- Believe in oneself, one's abilities, and goals. Develop an attitude that "I can be successful in this program." A self-defeating attitude will prevent students from making it. Do a self-assessment prior to applying to determine strengths and weaknesses. Put in motion a plan to correct weaknesses. Know why you are pursuing the degree and anticipate the hurdles that will be encountered. Don't let hurdles distract you, and don't take hassles personally. Be prepared for the frustrations of completing a dissertation.

- Set deliberate timetables for achieving each milestone in the program. Develop good study habits and time management practices. One cannot succeed in graduate school by procrastinating as one can do in undergraduate school.

- Develop a good relationship with all professors. Become a real person to them; be visible and impressive. Also, learn to tolerate people who have ideas and values which differ from yours. You cannot afford to be estranged from colleagues or professors.

- Have some research experience prior to enrolling. It is hard to learn research methodologies and conduct research at the same time. Start thinking about your research early; don't wait until comps to decide on the dissertation topic. Plan all coursework and papers in the direction of your dissertation.

- Know why you want to pursue a doctorate degree. Do not pursue it for financial gain, but for the intellectual challenge.

- Be prepared for the fact that not everyone will be supportive. Seek out a support system. Also, be able to endure isolation, yet establish open lines of communication with other students in the program.

- Develop a sense of self. Know why you are pursuing a doctorate degree. Realize that you bring special and unique perspectives to the program; don't lose your sense of who you are and blindly accept their values. Present yourself in a favorable manner.

- Create your own opportunities; don't wait for them. Be aggressive and energetic. Don't wait for someone to explain everything to you. Take advantage of all the program has to offer.

- Find a mentor early. It should be someone to help you cope with the politics and biases of the program. Establish direct contact with a faculty member in the department with whom you can develop a close relationship.

Part II

Retention of Minority Doctoral Students:
Institutional Policies and Practices

Part II

RETENTION OF MINORITY DOCTORAL STUDENTS:

INSTITUTIONAL POLICIES AND PRACTICES

Introduction

Minority groups—particularly Blacks and Hispanics—are greatly underrepresented in graduate and professional schools. Although the minority population of the United States is over 16 percent, minorities accounted for only 8 percent of the doctorates awarded to U.S. citizens in 1978-79 (Astin, 1982). One of the reasons for this underparticipation is the high attrition rate of minorities at the high school and undergraduate levels of the educational pipeline. This disparity persists at the graduate level where the dropout rate is 45 percent for Blacks and 52 percent for Chicanos and Puerto Ricans, as compared with 41 percent for Whites (Commission on the Higher Education of Minorities, 1982).

Although there is a growing body of literature on minority (particularly Black) retention at the undergraduate level, there has been very little research on factors affecting minority graduate retention. Boyd (1977) found that factors important for graduate enrollment and retention were usually the same as those for undergraduate enrollment and retention: contact with faculty, financial support, and preadmission scores. The major part, however, of the research on minority retention—both undergraduate and graduate—tends to focus on student characteristics rather than institutional characteristics. Part I of this report discusses in greater detail some of the literature on both undergraduate and graduate student characteristics as they relate to persistence. The following summarizes briefly the research on graduate student characteristics.

Family background characteristics were not found to be strongly related to success in graduate school (Arce & Manning, 1984; Noboa-Rios, 1982). Parental education of Black and Hispanic doctoral degree recipients was found to be somewhat higher than national figures for Blacks and Hispanics, but lower than the educational attainment levels of the parents of White doctorate recipients (Allen, Haddad, & Kirkland, 1984; National Board on Graduate Education, 1976; Pearson, 1984). On the other hand, high school achievement was cited as being a strong indicator of success in higher education (Astin, 1982; Noboa-Rios, 1982), and self-confidence was a personal quality that seemed to be related to success in completing graduate school (Duncan, 1976).

Minority students' experiences while attending graduate school were also seen as important predictors of their success. These included the degree of support and interest shown by a student's major adviser (Arce & Manning, 1984; Duncan, 1976); the existence of a support network at the institution (Blackwell, 1983; Duncan, 1976); the presence of minority faculty and staff at the institution (Blackwell, 1983; Carrington & Sedlacek, 1976; Duncan, 1976); and student participation in professional activities (Allen, Haddad, & Kirkland, 1984).

The Institutional Role in the Retention of Minority Graduate Students

Following is a brief overview of selected studies that cite institutional characteristics as a factor in graduate student access and retention.

Hamilton (1973), in a survey of graduate school programs for minority/disadvantaged students that was a joint project of the GRE Board and the Council of Graduate Schools in the United States, contacted 302 institutions representing 88 percent of all institutions in the nation offering graduate degrees. The survey attempted to obtain specific information about procedures and programs developed by graduate schools for minority and disadvantaged students. As a result of the survey, Hamilton developed a list of characteristics that he felt typified the most effective graduate programs for minorities and the disadvantaged. These were:

1. A stated policy regarding minority/disadvantaged students;
2. The coordination of recruitment, special admission, and student services by an entity above the departmental level;
3. Cooperation between the graduate school and the departments in the recruitment effort;
4. An accepted definition of the type of student sought and a focus of effort on a geographical region as part of the recruitment effort;
5. Special arrangements for the admission of students with marginal or submarginal credentials;
6. Provision of services to enrolled graduate students in those areas where minority/disadvantaged students need particular attention, and the coordination of such services by a single entity; and
7. Continuous program evaluation.

Hamilton describes the most effective programs as those "undertaken with consensus of the entire academic community, which have priority among the various activities of the institution, strong leadership, adequate funding, and which are responsive to the highest aspirations of the individuals involved" (p. 78).

At another level, Garcia (1980) surveyed 183 departments with accredited Ph.D. programs in psychology to obtain information about current admissions and retention policies. The study was concerned with the retention of the "marginal" Black graduate student. Only 23 percent of the institutions (42) responded to the survey, which explored departmental practices and policies related to recruitment, admission and retention, financial aid, representation of Black faculty, and adjustments to curriculum and other program changes to increase their "relevance" to Black students. Garcia's recommendations included changes in the recruiting process; a vigorous recruitment effort; clearly defined policy on the decision to admit marginally qualified Black students that takes into account all the ramifications of such a decision; development and implementation of support systems; provision of financial aid; increases in the numbers of competent Black faculty in the senior ranks; and curriculum and program innovations.

The National Board on Graduate Education (1976), in its review of minority group participation in graduate education, devoted a chapter to the institutional role in attracting and retaining minority graduate students. During the course of the study, NBGE staff visited 14 graduate schools to assess their activities vis-a-vis minority students. As a result of these visits, the staff divided institutions into three types: the "active" type, which was characterized by a strong, large-scale, comprehensive institutional commitment; the "nonactive" type, where it was clear that minority graduate participation was not a priority; and the institutions at which the success of the activities and programs for minority students was due to the efforts of a few individuals. The NBGE focused its analysis on the following areas: recruitment, admissions, supportive services, and financial aid.

The above four areas were also considered by Blackwell (1981) in his study of the production of Black professionals. He included these as predictors of first-year enrollment, total enrollment, and total number of Black students graduated. Since they represent the areas of institutional control that have the greatest impact on minority participation and retention in graduate school, these are the four areas around which the institutional case study interviews were organized.

Methodology

In the present study, the case study method was chosen to examine policies and procedures at graduate institutions as they relate to minority doctoral students. The case study method seemed more appropriate than a survey because of the lack of uniformity in structure across schools and the uneven application of policies within the schools due to the autonomy granted individual departments. Therefore, such an approach would yield greater insight into factors controllable by institutions that contribute to persistence.

The institutions chosen for the case studies were those that had agreed to participate in the overall study, that is, those that supplied names and addresses of their persisting and nonpersisting Black and Hispanic doctoral students in three disciplines: the humanities, the social sciences, and math and science. (In the case studies, these are referred to as the humanities department, the social sciences department and the sciences department even though the actual departments may have been the English department, the psychology department or the biology department.) The breakdown of institutions by type is as follows: one historically Black private, two public, and three private. Individuals interviewed at each institution included, but were not limited to, the following:

- An associate or assistant dean (usually the person responsible for implementing whatever policy the institution had regarding minority students).
- A minority affairs officer when there was a minority affairs office at the graduate school level.
- A department chair or director of graduate studies in each department that provided student interviewees. These were usually a humanities department, a social science department, and a math or science department.
- Faculty members from each of the participating departments. An attempt was made to interview members of the admissions committee and a minority faculty member when there was one.

Interviews were administered to 52 institutional personnel, roughly 9 per institution. At some institutions it was necessary to interview more staff than at others in order to acquire sufficient information. Information obtained in the interviews was supplemented with additional material from reports, brochures, catalogues, etc., from each institution.

An interview schedule that included important areas to be covered was developed. A separate interview schedule was used for each of the above staff designations. Early on in the interviewing process, it was agreed that a less detailed type of schedule than that used for the graduate students would yield richer information. The original schedule was then revised.

On the whole, the institutional personnel were surprisingly candid and forthright in the interviews. They willingly provided data and opinions on a number of very important topics concerning minority students. Most interesting were their responses to questions concerning institutional sensitivity to problems faced by minority graduate students, possible reasons for minority attrition, and recommendations for increasing minority retention in graduate school. These responses are quoted in the Appendix.*

The author has also attempted to provide some description of the "ambience" of the institutions as it appeared to her after several visits to the campuses. It is hoped that the case studies will convey not only the dry facts concerning the institutions' policies and practices regarding minority students, but also some measure of what it must be like for minority graduate students to attend these institutions. The author confesses to having been influenced by Lightfoot's (1983) concept of "portraiture" as applied to the case study method, where "[i]ndividual faces and voices are rendered in order to tell a broader story about the institutional culture."

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* Although data were collected in 1984, the present tense is used throughout the case studies.

Institution A

Historical Perspective

Institution A is a part of a publicly supported coeducational system of higher education in a large metropolitan area that offers undergraduate and graduate education through the doctoral level. The system is comprised of seven community and nine senior colleges, a graduate school (Institution A), and a medical school. Although its graduate school was not created until 1961, the university's history goes back to 1847, when the first of its colleges was founded. The present study focuses on the graduate school, which will be referred to as Institution A.

Institution A's major responsibility is the offering of the university's graduate programs. To this end, resources from various senior colleges in the system have been combined to offer doctoral and research programs as well as a select number of master's programs. The doctoral faculty is made up primarily of scholars on the faculties of the senior colleges and Institution A. Most members of the faculty, in addition to teaching in the graduate programs, also teach undergraduate courses at the various colleges in the system.

Located in the heart of a large city, Institution A is physically removed from the colleges, which are scattered over a wide radius in the city and in the area immediately surrounding the city. It is housed in a large, modern building whose facilities include a library, classrooms and seminar rooms, a computer center, various social science laboratories, an auditorium, dining facilities, and several lounges.

The first doctoral programs were established in 1961, and graduate programs are now offered in most areas of the liberal arts and the sciences, as well as in business, criminal justice, engineering, and social welfare. Doctoral programs in the social sciences, the humanities, mathematics, and education, and several nonlaboratory science courses are offered at Institution A which is also the administrative center for all the university's Ph.D. programs. Doctoral work in the science areas is done on several of the senior college campuses and in the university's school of medicine. Graduate degrees in the professional areas are offered at particular senior colleges.

Of the 175,000 students in the university system, approximately 2,900 are doctoral students enrolled in 30 programs. Of these, 245 students are Black and Hispanic. Given its urban location, Institution A recognizes that "an important part of its mission is to insure that minority group members have access to graduate education." To this end, it established an Office of Educational Opportunity (OEO), whose "mandate is to continually increase the representation of qualified minority students in...doctoral programs." Despite the decline in minority participation in graduate education, Institution A's minority enrollment has steadily increased over the past 14 years.

Organization of Institution A

The chief academic and administrative officer of Institution A is the president, assisted by a vice president and provost (the principal academic officer), who also serves as deputy president. There is an associate provost for academic affairs, an assistant vice president for student services, a vice president for finance and administration, and deans for urban policy and programs and research and university programs.

Institution A offers 30 doctoral programs and 7 master's programs. To qualify for the Ph.D. a student must complete all required coursework with a B average, meet the language and residence requirements, pass two examinations in his or her field, and complete and defend a doctoral dissertation. Each Ph.D.-granting department has an executive officer whose responsibility is to oversee the graduate program in that department. Typically, this person is a faculty member who may teach at one of the senior colleges as well as at Institution A and who maintains office hours at Institution A. He or she is assisted by an administrative assistant who is usually full-time staff at the graduate school. Faculty who teach in the various departments may also hold teaching appointments at other colleges in the system.

At Institution A's administrative level, the person responsible for implementing policy regarding minority students is the assistant vice president for student services, whose other responsibilities include overseeing most of the student-related areas. The Office of Educational Opportunity, which is under the assistant vice president for student services, has as its main responsibility the actual implementation of the school's policies related to minority students, through a program of vigorous recruitment, support, and retention. This office, established in 1970 and headed by a coordinator, is supported by "hard" money. Its major concerns are recruitment, admissions, financial aid, retention, fundraising, and personal counseling for minority students.

Policies and Practices Regarding Minority Graduate Students

Following is a description of Institution A's policies and practices regarding minority students as expressed at various levels in key areas.

Recruitment

Almost all recruitment of minority students is done by the coordinator of the Office of Educational Opportunity. His recruiting base is the colleges in the system; he also recruits at conferences, and visits and maintains contact with colleges in the metropolitan areas, the Northeast corridor, some historically Black colleges, and some Ivy League colleges. He has developed fliers and brochures especially for minorities, and hosts open houses as part of the recruitment effort. The OEO undertakes all the recruitment of minority students for departments interviewed as part of this study.

A Committee on Educational Opportunity, composed of four faculty and three minority students, oversees all aspects of the OEO's work, including the recruitment and retention of minority students. The committee refines the broad policy of Institution A with regard to minorities.

Admissions

Institution A's admissions criteria are the following: 3.0 GPA, GRE scores (no cut-off scores), two letters of recommendation, and a statement describing the applicant's reasons for pursuing the Ph.D. Applications are screened by the admissions office for compliance with the school's requirements, before they are sent to the departments.

OEO. Since there is no provision for ethnic self-identification of applicants on the application form, the coordinator of the OEO undertakes to identify minority students once they have applied, and to make these students known to the departments. He reviews the application forms for compliance with the institution's requirements, and, where this is lacking, helps the student to improve the application. In the case of students who may be marginal but look promising, he discusses the applications with the departments. How successful this is depends on the department in question.

The Humanities Department. The department has 183 graduate students, of whom 5 are Black. There are no Hispanics. The overall acceptance rate is 33 percent; the acceptance rate for minorities was unknown at the time of the interview. The department's admissions criteria include three letters of recommendation, a statement of intent, a transcript (the higher the GPA the better), and GRE scores (no cut-off scores). The departmental committee is made up of four faculty members, and applications are sorted into three groups: accept/reject, accept with probation, and reject with advice to reapply. No exceptions to the stated criteria requirements are made for minority applicants.

The Science Department. There are 70 graduate students in the sciences department, of whom 2 are Black and 3 are Hispanic. The department has a 50 percent acceptance rate overall. The chairperson would like to increase the minority enrollment. The criteria for admission include transcripts (GPA should be better than 3.0), GRE scores (these are not always required and there are no fixed cut-off scores), two letters of recommendation, and a personal statement. Sometimes exceptions are made for minority students who do not meet all the criteria. The chairperson saw this as reflecting the department's attitude of greater flexibility of requirements to accommodate the less traditional student. The departmental admissions committee is made up of five members who make the decision to accept, accept with conditions, refer to the master's program for strengthening of coursework, or reject.

The Social Science Department. The social science department has 125 doctoral students, of whom 28 are Black and 16 are Hispanic. With only 15 to 20 available places, this highly competitive program receives approximately 500 applications a year. In the past three years minority enrollment has doubled; in the current first year class, half of the class are minorities. The admissions criteria for the department include GRE scores (there are no cut-off scores, but both verbal and quantitative scores should be in the 700's), three letters of recommendation, a 3.5 GPA, a personal statement, and evidence of maturity (based on two personal interviews). For minority applicants, GRE scores and GPA are not weighted as heavily as for White applicants. The department's minority student association has a student committee that is part of the overall admissions committee and reviews and makes recommendations on minority candidates.

The brochure describing the program states that it "has an active commitment to increase the enrollment of qualified minority students.... We are aware of the possibility of special difficulties in evaluating applications from members of disadvantaged minorities, and therefore attempt to assess such applications within the context of individual backgrounds and cultural experience."

Financial Support

Institution A administers a program of fellowships, grants, assistantships, tuition grants and waivers, loans, and college work-study assignments. These are awarded on the basis of need and merit. A small number of awards is set aside for minority students. These are the minority fellowships, which are 10 percent of the president's discretionary funds and are awarded on a competitive basis. Institution A has been successful in obtaining since 1978 approximately $1.5 million in Graduate and Professional Opportunity Program (G*POP) funds. The OEO has been instrumental in obtaining and administering this funding. It also administers the minority fellowships funded by the institution. Another source of funding for all students are teaching positions at the colleges in the system.

The Humanities Department. There are no funds earmarked for minority students other than those available through Institution A's general fund for minority students.

The Science Department. G*POP funds, administered by the OEO, are available to attract minority students. There are also funds available through a national fellowship program for minority students.

The Social Science Department. All minority students in this department receive some financial support. Some is from G*POP funds, and some is from university minority fellowship funds, national fellowships for minority students, and teaching assistantships.

Other Support

The Office of Educational Opportunity is the main source of other support programs for minority students at Institution A. The coordinator of the office consults with executive officers about the support needs of minority students. The OEO sponsors open houses, workshops, and preapplication seminars throughout the year to assist prospective students in making career decisions. It also provides educational, career, and financial aid counseling or referral to enrolled students.

The coordinator acts as a liaison with the minority students association, which holds general meetings to serve as an open forum for addressing student concerns and exchanging ideas and information. The association also sponsors seminars and informal study groups. Together with the OEO, it holds orientation sessions to help new students gain a realistic view of doctoral studies.

The only department (of those included in this study) that provides departmental support in this category for minority students is the social science department, which holds a yearly conference on minority issues in its particular discipline. The minority student association for the department assigns an informal adviser to each minority student. The association also votes on major issues that come before the program, such as curriculum, tenure, and chairperson.

Conclusion

Institution A has a clearly stated policy related to minority students; its descriptive literature and catalogue affirm its commitment to "insure that minority group members have access to graduate education." Located, as it is, in a city with very large Black and Hispanic populations, it has chosen to make a commitment to those populations. The establishment and support of the Office of Educational Opportunity as the implementation arm of its policy is another indication of the institution's commitment.

The Office of Educational Opportunity provides the centralized services at the doctoral level that are so necessary, especially in an institution as decentralized as Institution A, to ensure that policies relating to minority students are implemented. The coordinator of the OEO is a highly motivated, dedicated individual who has brought to his job a strong sense of responsibility for overseeing the practices that reflect institutional policy in this area. He is, in every sense, an agent for the fulfillment of the institution's commitment to the recruitment, retention, and support of minority students. The functions of the OEO span a wide range of minority-related activities, from recruitment through job placement. The fact that this office performs such varied functions is perhaps more important at an institution such as this, where there is not much departmental activity at the graduate level, with executive officers and faculty being based (at least part of the time) at the senior colleges of the system. The input into policymaking enjoyed by the Committee on Educational Oportunity and the minority student association augments the OEO's effectiveness.

The results of Institution A's implementation of its policy are evident in the amount of G*POP funding that the OEO has been able to raise; in the steady increase since the establishment of the OEO in minority graduate enrollment even at a time of decreasing national enrollment of minorities in graduate education; and in the number of minority Ph.D.'s produced by the institution over the past 14 years: 120 since 1970, of whom 18 percent earned their degrees in the sciences.

Although there is every evidence of support from Institution A's administration for the OEO, funding for the office has not kept pace with increased enrollment, primarily because of budget constraints. Also, the inability to identify applicants by ethnicity, bound as the administration perceives itself to be by federal constraints, seems to place an unfair burden on the OEO and to increase the risk of a minority student's not being identified at the time of application or subsequently. Efforts are being made to find a way of easing this situation.

At the departmental level, the science department seems to provide a supportive atmosphere for minority students. As the executive officer stated, many of the faculty have been teaching large numbers of minority undergraduates in the senior colleges and have developed a sensitivity to their particular problems. "Those [faculty members] who are insensitive to the situation just cannot continue to exist [comfortably in the setting]."

The social science department has a number of minority-related activities and has made an effort to admit and support minority students in a highly competitive department.

There have been allegations that there is less sensitivity to minority issues at the departmental level than at the administrative level. The feeling is that faculty, although well intentioned, would prefer not to consider race as a contributing factor in setting policy guidelines (the rationale being that departmental considerations should remain totally scholarly). This is not the case at Institution A's administrative level.

All in all, however, of the institutions studied, Institution A seems to represent the most effective combination of supportive policies regarding minority graduate students with a centralized locus of authority and leadership for the implementation of these policies.

Institution B

Historical Perspective

The university of which Institution B is a part had its beginnings in 1754, with the granting of a charter for the founding of a college dedicated to instruction in "the Learned Languages and the Liberal Arts and Sciences." Since then this "college" has gradually evolved into a full-fledged university with additions of various professional schools and the three "faculties" that now compose the Graduate School of Arts and Sciences (Institution B), the subject of this study.

The two undergraduate schools that are part of the university enroll, between them, approximately 4,000 degree-seeking undergraduates; there are 3,500 students in the graduate school. Both graduate and undergraduate schools occupy the same campus, which is located in the center of a large city. The collegial setting created by stately buildings and beautifully laid-out grounds belies the reality of the school's city location with drug addicts and street people "hanging out" at the very entrance of the institution and the many Black and Hispanic residents of the neighborhood going about their daily tasks in the streets outside.

Institution B is one of the most prestigious graduate schools in the country, with several graduate departments ranked in the top five in the nation. An emphasis on excellence and a sense of competitiveness pervades the atmosphere, which is quite impersonal; Institution B is not a nurturing place. The interviews indicated that the attitude of many of the staff and faculty is, "if you can't take the pressure, you don't belong here." This applies to both minority and White graduate students. As one staff member commented, "White students are alienated, too. There is no center to this place. A lot is required of the student who comes here. He or she requires a very strong underpinning academically and personally." Regarding the institution's attitude towards minority students, another staff member stated: "[W]e do too little to establish a feeling of camaraderie among students.... We need to get more faculty participation in order to establish a kind of environment where minority students feel more comfortable." Although the institution is located in a city with large Black and Hispanic populations, its minority enrollment is very low, numbering 110 (35 Black and 75 Hispanic students) at the graduate school level.

Organization of the Graduate School

The graduate school offers 43 programs in the social sciences, the humanities, and the natural sciences. Although the institution grants three degrees—the Master of Arts, the Master of Philosophy, and the Doctor of Philosophy—the goal of most graduate students is the Ph.D.

The chief administrative officer at the graduate school is the dean, who presides over the Executive Committee of the Graduate School which is made up of graduate school faculty. The associate dean is responsible for admissions, financial aid, housing, discipline, advising, and recruiting. He is assisted by three assistant deans, each one overseeing a particular area: Humanities, Social Sciences, or Natural Sciences. It is this office that is responsible for minority-related activities.

Policies and Practices Regarding Minority Graduate Students

Following is a description of the institution's policies and practices regarding minority graduate students as reflected in key activities at both the graduate school and the departmental levels.

Recruitment

Although some recruiting is done by the associate dean, most of the recruitment efforts are left to the departments. At the graduate school level, the recruitment of minorities focuses on undergraduate schools in the immediate area. There are not "sufficient" funds for recruitment efforts, although the graduate school did participate in a federally funded program in which a group of Ivy League schools conducted workshops for prospective minority graduate students that provided information about the schools, financial aid, etc. Never intended as more than a demonstration project, this was terminated after several years with the hope that others would undertake similar activities.

At the departmental level, the extent of recruitment efforts depends on the department's interest. The humanities department stated that recruitment was left "up to the dean's office." The science department undertakes no recruitment activities specifically aimed at minorities. The social science department made a short-lived attempt to recruit minority students in 1971, when it sent one of its minority faculty members to historically Black colleges to recruit. In his words, "the take was zero." Although three Black women were admitted and did enroll as a result of this effort, none of them completed a degree.

Admissions

Applications are received by the graduate school and are processed for each area by the appropriate assistant dean. Admissions decisions are left strictly up to the departments, although the associate dean may call a department's attention to a particularly promising minority applicant. (Racial self-identification on the application form is optional.) The graduate school criterion for admission is a B.A. All other criteria are set by the departments.

The Humanities Department. This department has 280 M.A./Ph.D. students, although some are just technically "on the books" and are not expected to return. Of 360 applicants, the department typically accepts 250. It will typically accept 28 out of 38 applications (beyond the cut-off level) to continue with the doctoral program. There are three Black students in the Ph.D. program and no Hispanics. Admissions criteria include (in order of importance) a personal statement, an A average in undergraduate courses in the subject area, a GRE verbal score of 700 or above, an essay from an advanced candidate, and three letters of recommendation. In the words of the staff member interviewed: "The review procedure is selective." Exceptions are made on criteria for minority applicants. "We look at the preparation that the [undergraduate] school has been able to provide.... We will take a chance if the person shows potential. There is no leadership from the administration on getting minorities in."

The Science Department. There are 30 students enrolled in the doctoral program in this department. Out of 200 applicants, 5 to 8 students are accepted. There are no Blacks and no Hispanics in the department at present. Admissions criteria include (in order of importance) GRE scores (1200 combined verbal and quantitative), three letters of recommendation, a GPA of not less than 3.3, and a statement of intent. The staff member interviewed termed the admissions process concerning minority applicants "insensitive [but] fair. You don't see interest in extra measures to get minority students."

The Social Science Department. This department has 150 doctoral students, and its acceptance rate is 33 percent. There are two Black and two Hispanic doctoral students. Admissions criteria are undergraduate record (GPA), letters of recommendation, a statement of intent, and GRE scores. There seemed to be no cut-off points for either GPA or GRE scores; also, the criteria were viewed "as an entire package" with no one criterion more important than another. Exceptions are made for minority applicants if they have advocates. The department's two minority faculty had, up to the previous year, made every effort to admit minority applicants. One of the faculty members has left, however, and the one who remained has not been able to put as much time into this activity by himself.

Financial Support

The associate dean administers Danforth Fellowships for Puerto Rican students. Previously (1969) there was a minority fellowship program that provided six-year fellowships. These were established with the hope that federal and state funding would remain at the same level. The following year, however, all government funding stopped, with the result that the fellowships were discontinued. The Danforth Fellowships, then, are the only funds specifically earmarked for minority students.

Awards of fellowships and teaching and research assistantships depend on the departments. In general, these are given to students in the top 20 percent. Minority students in the humanities department "do not do that well on fellowship competitions." However, minorities in the program are presently either part time or funded. All graduate students in the natural sciences department are fully funded. The minority doctoral students in the social science department are presently receiving funding from the department.

Other Support

The associate dean and the assistant deans provide financial aid counseling and some assistance with housing, which, according to a staff member is "racist." This office also provides some personal counseling and refers students with problems to appropriate offices for assistance. Staff members interviewed at this level felt that if minority students were doing reasonably well, they became integrated into the system. However, if they had problems, there was no support either from the institution or from their peers, and they tended not to survive. Said one staff member, "[Institution B's] policy in this matter is to accept students and then not provide much support for the first year. This is a sort of winnowing process, to see who makes it through the first year."

The humanities department provides some counseling for minority students in that the director of graduate studies as well as the administrative assistant are quite sensitive to minority-related problems. The science department has no support activities for minorities. The social science department provides, through its two minority faculty members, some mentoring of minority students. Also, as one person who was interviewed from the department stated, most faculty feel committed to their students: "Once you have a student you try to get [him or her] through."

Conclusion

Institution B does not seem to have any policy regarding minority graduate students, nor do most of its practices encourage or support the presence of such students. One of the persons interviewed summed up the institution's attitude toward minority students this way: "The position of our Graduate School of Arts and Sciences is that they do not want to take 'risk' students at all. They are not prepared to take students who come to them and are not pretty much whole.... We are lacking the absolute conviction that we really do want minority graduate students at this institution. The faculty are not encouraged to seek [them] out. There is no centralized recruitment effort. Leadership has not been provided to do this. It is reflected in a number of ways: the lack of faculty and senior staff who are minorities; no commitment of institutional resources in any way, shape, or form."

Although the associate dean and his staff, including the assistant deans, are sensitive to the problems faced by minority students at such an institution, they have no support from the institution to put into effect practices that might assist minorities to enroll and persist in the graduate school. One has the feeling that, in the face of overwhelming indifference, they have become thoroughly demoralized. Those minority students who do receive assistance and support do so because the department or individuals within the department care about their survival (as in the case of the humanities department and the social science department). The presence of minority faculty, as in the social science department, is helpful if those faculty members are committed to admitting, retaining, and supporting minority students. If, however, Institution B wishes to adopt a policy of support for minority graduate students, it will have to provide leadership at the graduate school level as well as a plan for implementing this policy throughout the institution.

Institution C

Historical Perspective

Institution C is located in a historic city. On the university's campus, tree-lined streets with elegant townhouses mingle with stark, modern university buildings. Over half of the city's inhabitants are Black. The city draws professionals of many kinds, and the institution accommodates those who wish to combine the pursuit of a graduate degree with a job by offering an array of night classes. There are about 9,000 full-time and 7,400 part-time students. The institution recognizes its "special opportunities in and obligations to [the city in which it is located]," and it is a primary objective of the university to utilize its relationship to the city in developing its character and orientation. The university includes nine colleges, schools, and divisions, of which the Graduate School of Arts and Sciences (Institution C) is one.

Organization of the Graduate School

The Graduate School of Arts and Sciences offers 52 programs leading to master's degrees and 30 leading to doctor of philosophy degrees. The school is under the direction of the graduate faculty of arts and sciences, whose responsibility it is to "set the requirements for admission, to provide courses and programs of study and research, to establish academic standards for its degrees, to recommend to the Board of Trustees the awarding of degrees, to lay down regulations as needed for the operation of the School, and to generally supervise its activities." The chief administrative officer of the graduate school is the graduate dean, who is chair of the dean's council, the body responsible to the faculty of the school for all policy matters.

The graduate dean is assisted by an associate dean and three assistant deans. The associate dean, although not a formally designated contact person for minority students, does fulfill that role informally. The university's bulletin states that the institution does not "discriminate against any person on the basis of race, color, religion, sex, national origin, age, handicap, or veteran status."

Each department has a chairperson or program director, who oversees both graduate and undergraduate studies, and graduate advisers for different specialty areas within the department. Some departments have directors of graduate studies.

Policies and Practices Regarding Minority Graduate Students

Following is a description of institutional policies and practices regarding minority students as reflected at the graduate school level and within the selected departments. The description is organized around key areas.

Recruitment

At the graduate school level there are presently no formal recruitment programs. For two or three years in a row, the graduate school used the ETS/GRE Minority Locater Service, with poor results. The associate dean describes the experience as "very disappointing. We sent out hundreds of letters and got very few replies in return [five or six]. One student applied as a result." He stated that the school had set aside funds for minority graduate fellowships that would have been offered if these efforts had been successful. The recruitment efforts of the department selected to represent the humanities consist of sending brochures and flyers to minority institutions. There had previously been a Ford Foundation/Smithsonian Institution-funded program to recruit minorities, but funding terminated. The selected science department does not make a special effort to recruit minority students. The social science department selects minority applicants at historically Black institutions, maintains a relationship with a feeder school in the area, depends on its minority students to do some recruiting, and recruits recipients of national fellowships for minorities.

Admissions

The graduate school involvement with the admissions process includes sending applications to the departments for review and recommendation and monitoring inconsistencies in departmental decisions to admit students. That is, it tries to ensure that the same standards are applied to all students, and questions cases where recommendations are made to admit students whose qualifications are clearly below standard or to deny admission to students whose qualifications are clearly above standard. Admissions criteria for the graduate school include the following: a minimum 3.0 GPA; an appropriate undergraduate major; GRE scores for Ph.D. and some master's applicants (cut-off scores are not used); and three or four letters of recommendation. (Although interviews with individual departments revealed differing admissions criteria, these are not reported here since the graduate school maintains that the criteria cited above are those that are binding.)

The Humanities Department. The selected department has 65 doctoral students, of whom 4 are Black and 1 is Hispanic. Overall, of 12 to 15 applicants, it will accept 10 to 12 students. It usually accepts one or two Black applicants per year, but does not know how many applications it receives from Black students. The one Hispanic student now enrolled is the only one, it is thought, ever to have applied. There is usually some contact with students before applications are submitted.

The admissions committee is made up of four faculty members who—"9 times out of 10"—are in agreement. Also, it has accepted applicants, both minority and White, who have had slightly lower GPA's than the required 3.0 but who have provided other information to support their qualifications, e.g., GRE scores and/or references.

The Science Department. This department has 25 doctoral students; its acceptance rate averages about 50 percent. One Black and two Hispanic doctoral students are presently enrolled. Acceptance rates for minority applicants are not available since the number of minority applicants is not known. No exceptions are made for minority applicants whose academic records are below the graduate school standard. The admissions committee is comprised of the director of graduate studies and four other faculty members.

The Social Science Program. The social science program selected for the study has 66 doctoral students, of whom 12 are Black and 3 Hispanic. The department receives 200-300 applications a year. It has found that there are a reasonable number of minority candidates in the top 25 percent interviewed for admission and makes its selection of minority students from those applications. It typically accepts 2 to 4 minority applicants of the approximately 15 minorities who apply each year.

Financial Support

At present there are no fellowships or assistantships specifically earmarked for minority support, either at the graduate school level or at the departmental level. Tuition credits and fellowships are awarded by the graduate school, while assistantships are technically under the supervision of the departments. The social science department stated that it "almost always provides financial support for minority students." There is also a national fellowship available for minority students in this discipline.

Other Support

At the graduate school level there are no programs that fit into this category. The humanities department has an Afro-American field in its degree programs that might provide some focus for minority students in that department. The science department has no support programs. The social science department had a remedial English intervention program at one time, but it was not utilized by the students. Also, it has a minority concern committee, made up of minority students and the graduate director, that provides support activities.

Conclusion

Institution C does not seem to have a policy regarding minority graduate students. With its large part-time enrollment, the institution tends to be impersonal, especially with regard to graduate students. As one staff person stated: "University support services here are there to be called upon as needed. How you get the student into the service in a pleasant way, however, is another thing." Institution C has not yet found an effective way to do this for its students in general, much less its minority graduate students, who may have a greater than average need for the support services.

The support provided by departments varies in degree and type. The humanities department is somewhat supportive and is aware of minority related problems; the science department provides no special support. The social science department provides the most support of the three. A policy of commitment to support services at the graduate school level might be a first step in bringing such services to minority students.

Institution D

Historical Perspective

Institution D is the graduate school at a historically Black institution, that is, one of a group of slightly more than 100 colleges and universities in the country. Most of these institutions were established after the Civil War for the exclusive purpose of educating Black Americans. And, of course, during the period of segregation that followed, historically Black colleges bore most of the responsibility for providing higher education to Black Americans. Today, in a period following the desegregation of institutions of higher education, with the resulting greater access to educational opportunities for racial minorities, Black colleges are faced with a fight for survival. This is due not only to questions raised regarding the present usefulness of their role in educating Black Americans, but also to the following factors:

- Declines in the enrollment of college-age students
- Increased cost of a college education
- Fewer (and smaller) available grants and loans for students
- Scarcity of financial resources
- Court-ordered desegregation for many public institutions
- Competition for more able students

The university of which Institution D is a part, is one of a handful of historically Black colleges that award graduate degrees. It was founded in 1866 as a theological and normal school. In 1867, with a change in name, its rather narrow scope was expanded to include the following departments: preparatory, collegiate, medical, law, and agriculture. In 1926, the university appointed its first Black president.

The university is located in a city with a large Black population. Its influence is felt throughout the community, with its sprawling main campus occupying more than 75 acres in the heart of the city. In keeping with its mission to provide education to Black Americans, it enrolls more than 12,000 students, from every state in the nation. (It also has a sizable population of foreign students from more than 90 countries.)

Seventeen fully accredited schools and colleges offer more than 70 undergraduate and graduate degrees. Several colleges and schools have been added during the last 15 years, including a college of nursing and schools of architecture and planning, business and public administration, communications, education, human ecology, and allied health sciences.

Graduate study at the university was formally introduced by the board of trustees in 1837. In 1934, the board authorized the designation of a separate structure, to be known as "The Graduate School," which was to be headed by a dean and administered by a graduate council made up of faculty from the departments offering graduate degrees. In 1976, the Graduate School of Arts and Sciences, as it is now constituted, was formally inaugurated and given exclusive jurisdiction over programs leading to Master of Arts, Master of Science, and Ph.D. degrees in the basic arts and science disciplines.

Organization of the Graduate School

The Graduate School of Arts and Sciences (Institution D) presently awards master's degrees in 31 disciplines, and the Doctor of Philosophy degree in 23 disciplines. Enrollment is about 1,500, with every state and 55 countries represented.

The graduate school is under the administrative leadership of a dean assisted by four associate deans who preside over the following areas: administration, educational affairs, research affairs, and student relations. Academic programs are divided into five divisions: natural sciences, biological sciences, social sciences, arts and humanities, and applied sciences. Approximately 300 graduate faculty members serve throughout the five academic divisions.

Since Institution D is predominantly minority (as is the entire institution), there is no one office that is responsible for minority graduate students. The associate dean of student relations, however, presides over the areas that encompass the support services for all students. The function of this office is to act as ombudsman for students enrolled in the graduate school. It handles registration, provides personal and academic counseling, administers grievance procedures, and encourages departments to be more vigorous in their recruitment efforts. The office was established in 1967; the present associate dean has held her position since 1979.

Policies and Practices Regarding Graduate Students

Following is a description of institutional policies and practices regarding graduate students as reflected at the graduate school and departmental levels.

Recruitment

Institution D is in the process of developing a recruitment philosophy. The lack of such a philosophy has been cited as a reason for the low proportion of students from traditionally Black institutions enrolled in the graduate school. The feeling is that many of these students may not apply because they are unaware of the range of graduate programs that are available. At this level, there is also the feeling that departments should be more vigorous in their efforts to recruit students, especially those from traditionally Black institutions.

The humanities department regularly sends letters to department chairs at various institutions and makes presentations in an attempt to recruit students. The science department does not have a policy regarding recruitment, nor does it undertake recruitment activities. Staff in that department cited a need to begin recruiting at Black colleges since presently students usually learn about the program through word of mouth or because of relationships between their undergraduate professors and professors in the department. Staff interviewed in the social science department supported departmental recruitment, although they admitted that little concerted recruitment effort was currently underway. Students who apply, especially those from traditionally Black institutions, do so because of suggestions from friends. The feeder schools to the department remain predominantly White institutions.

Admissions

During the past academic year (1984-85), 1,350 students applied to Institution D; more than 1,300 were enrolled. Fifty-five percent of the applicants were Black Americans, with students from African and Caribbean countries, Hispanics, Asian Americans, and Whites making up the remainder of the student body. An overwhelming number of the applicants (76 percent) had received their undergraduate degrees from predominantly White schools; sixty percent of the students enrolled in the graduate school had attended predominantly White schools.

While various departments may superimpose additional admissions criteria on their applicants, the basic graduate school criteria are a bachelor's degree from an accredited institution and a "good record," which is widely interpreted. Some specific departments, such as arts and social sciences, may also require a 3.0 GPA, while the sciences will admit students with less than a 3.0 GPA. GRE scores may also be requested, although a minimum score is not required for admission.

The following section describes the admissions requirements of the three departments that are part of this case study.

Humanities Department. Some 50 applicants seek admission to the humanities department every year, of whom 5 to 6 eventually enroll. A sizable number (approximately 10 per year) are admitted, pay registration fees, and never matriculate. Admissions criteria are a GPA of at least 3.0, letters of recommendation, and an autobiographical statement. Candidates are evaluated on the basis of motivation, maturity, and interest as reflected in the letters of recommendation and the autobiography. Whenever possible, personal interviews are held. The autobiography is carefully scrutinized to determine writing skills and the extent to which a "strong...background [in the discipline]" is exhibited. Ph.D. candidates in the department are largely graduates of traditionally Black institutions.

Science Department. This department differs from most of the programs at Institution D in that the majority of its Ph.D. candidates are foreign students. Last year, of the 16 students admitted, 10 were non-U.S. citizens. Another dissimilarity is that most of the Black students in the department received their undergraduate education at traditionally Black institutions. Approximately 30 applications to the Ph.D. program are received each year. Nearly 6 percent of the applicants are rejected because of low GPA, or a lack of background in the discipline or related disciplines. Admissions criteria include an undergraduate major in this or a related discipline; a GPA of at least 2.75; GRE scores (no cut-off scores); TOEFL scores (for non-English-speaking foreign students); three letters of recommendation from professors in the discipline; and a score of 3.2 on an expository writing exam.

Social Science Department. Most of the students accepted into this graduate program received their undergraduate degrees at predominantly White institutions. This past year, 77 students applied to the program, 30 were admitted, and 16 matriculated. Of the admitted students, 6 were White, while the remainder were Black Americans (yearly estimate). Admissions criteria include a GPA of at least 3.0, letters of recommendation, an autobiographical statement, and GRE scores (no minimum scores required).

Financial Support

Financial aid is distributed upon departmental recommendation to the dean's office, where a financial aid appointment/promotions committee gives final approval. Unless a financial aid source has specific stipulations, judgments are most often based on the type of student enrollment (full time) and whether the student is in "good standing." Among the types of financial aid provided are the following:

- Assistantships. Research or teaching assistantships are provided by departments or by professors who have secured research grants. Teaching assistantships are usually around $2,000 and require that the recipients teach courses or labs. The amount of a research assistantship is dependent upon the salary written into the research grant. Students are selected by instructors to serve as their research assistants.

- Traineeships (e.g., MARC or MBRS). These are available from federal sources and carry the stipulation that recipients cannot have additional work income. The awards are usually between $4,300 and $5,500.

- Federal traineeships or loans (e.g., G*POP). Because of the low award amount, departments are asked to supplement G*POP by hiring students to perform additional duties.

- Philanthropic awards, such as Danforth Foundation fellowships.

- Terminal fellowships of $5,200 each are awarded by the graduate school to nine distinguished doctoral fellows upon recommendation of the departments. These fellowships carry

> the stipulation that a recipient complete his or her dissertation in the academic year in which the award is received.

Although some of the financial aid packages provide tuition and living expenses, some provide only tuition assistance. Less than 40 percent of the graduate students receive financial support from Institution D.

The humanities department at one time provided 16 graduate assistantships of $4,200 each. This year the number of graduate assistantships has been reduced by four. The science department is able to support nearly 90 percent of its Ph.D. candidates. Of the 15 current students, 13 have graduate assistantships ($4,495 for 10 months) and 2 are teaching fellows ($5,000 per year). Among the sources of aid available are MBRS, MARC, G*POP, NSF grants, and trustee fellowships. Sources of financial aid for graduate students in the social science department are teaching assistantships and graduate assistantships. Other sources include fellowships from a national fellowship program as well as from the Army Research Institute.

Other Support

The associate dean of students and her staff provide confidential academic and personal counseling to any student requesting these services. This office also oversees grievance procedures against professors or departments and does some limited job placement, particularly for students with Danforth fellowships who may receive teaching positions at traditionally Black institutions. Availability of graduate housing is severely limited and poses a serious problem in that housing in the city where Institution D is located is quite costly.

It is not possible to discuss support services at a historically Black institution in the same context as support services for minority students in a predominantly White institution. Evidence of support at predominantly White schools is based on the existence of special programs that address the academic and social needs of minority graduate students. These programs are based on the acknowledgment that minority students have needs that are "different" from those of White students. Programs at predominantly White institutions that come under the category of "other support," such as orientation programs, as well as programs that aid in the establishment and maintenance of a social network to decrease the feelings of alienation and isolation of the minority student, seem unnecessary at most institutions where minorities are in the majority.

Two of the strengths most often cited as characteristic of historically Black institutions are the nurturing atmosphere and the existence of "mentors" and "role models" among faculty. These certainly exist at Institution D. Although the institution could not cite specific programs that fit into the "other support" category, students interviewed who had attended this institution specifically mentioned the "support" provided by Institution D, as well as the interest shown by faculty in their progress, the mentoring relationships established, and the offering of courses or programs of study with a "Black" orientation. Such programs at predominantly White institutions are often accorded "outlaw" status, or are not considered to be "serious" study.

Conclusion

Institution D, although somewhat larger and better off financially than graduate schools at other historically Black institutions, exhibits problems that have recently beset this type of institution. Among the most obvious are scarcity of financial resources, fewer and smaller grants and loans for students, and competition for the more able students.

Scarcity of financial resources has severely limited the recruitment activities of the institution, especially at traditionally Black colleges. Even given a shortage of funds, however, the need exists for the development of a clear recruitment policy that will place responsibility for recruitment at either the graduate school or the departmental level, and that will focus the recruitment effort.

A decrease in grants and loans for students has resulted in diminishing Institution D's chances of recruiting able students; it is competing with institutions such as Stanford, Harvard, and other Ivy League or Big Ten schools that offer much better financial aid packages. This is a critical problem, and it was mentioned by every staff person interviewed as a barrier to Institution D's recruitment of able students. One person interviewed in the dean's office felt that the presence or absence of financial aid is the primary determining factor in where a student will pursue graduate studies. This factor is also related to the third problem, competition for the more able students.

While exhibiting many of the symptoms that seem to plague the historically Black institutions, especially at present, Institution D also displays many of their positive features. The atmosphere, both academic and social, was seen as "positive" by all its students who were interviewed as part of this study. The opportunity for establishing mentoring relationships with faculty, the availability of role models, and the "legitimization" of Black-oriented areas of specialization in the various disciplines were cited again and again by student interviewees as their reasons for attending this institution. As one graduate stated: "They make all the difference."

Institution E

Historical Perspective

Although the university of which Institution E is a part has been in existence for almost 250 years, it did not offer regular instruction at the graduate level for the first 150 years of its history. Even today, it remains primarily an undergraduate institution, with undergraduates outnumbering graduate students by a ratio of three to one. Institution E differs from nearly all other universities of comparable scale in that its graduate school is much smaller than the undergraduate college. Nevertheless, it has one of the most prestigious graduate schools in the United States, and attracts many of the nation's most talented prospective graduate students, such as National Science Foundation fellows and (formerly) Danforth fellows. In the 1977 Ladd-Lipset survey of graduate programs, 5 of Institution E's programs were among the top five and 3 more among the top seven nationally, out of the 14 fields covered.

Situated in a prosperous small town, the university dominates the social, intellectual, and commercial life of the town just as undergraduate life dominates the mood of the campus. It is one of the most beautiful campuses in the country, with neo-Gothic structures blending with modern buildings by some of the world's famous architects.

The graduate college, the main graduate student dormitory, and the married student apartments are physically removed from the undergraduate section of campus, and graduate students keep a low profile on campus. The faculty like to think that this is due to the heavy workload that most graduate students carry. Some faculty and staff, however, point out that the university's commitment to and support of its undergraduate student body far exceeds that given to its graduate students. This is reflected in the complaints of graduate students of being "left out of things" and in their feelings of alienation and social isolation.

Institution E, as well as the university to which it belongs, has the reputation of being a conservative institution. The graduate school catalogue, nevertheless, affirms in its Equal Opportunity Policy that it "has a clear interest and desire to reach out as widely as possible in a continuing effort to attract the best possible individuals as students and as members of the faculty and staff." It goes on to say that admission to and employment at the university are open to all qualified candidates regardless of race, color, national origin, religion, sex, or handicap.

Organization of the Graduate School

In addition to maintaining a graduate school that is smaller in proportion to the undergraduate school than is the case at most comparable institutions, the university differs markedly from others of its type and level of prestige by focusing almost exclusively on the arts and sciences. The arts and sciences set the tone of the institution, a tone that is quite unique given the distinguishing characteristics of the institution. There are no professional schools of law, business, medicine, education, social work, or many other professional areas.

There is one graduate dean in the graduate school, with assistant deans, and a director of graduate admissions. The assistant deans preside over the areas of natural sciences, architecture, engineering and applied science; student affairs, housing and foreign students; humanities and social sciences; and budget and financial planning.

The Ph.D. is granted in 48 fields. Only five fields award master's degrees as final degrees, and these are non-arts and science fields. Only in two arts and science areas does Institution E allow a student to enroll as a candidate for the Master of Arts degree. In all other fields of study, the Master of Arts is awarded as an incidental degree for which doctoral students may apply after they pass the general examination. To qualify for the Ph.D., candidates must pass the general examination in their subjects, submit acceptable dissertations, and pass the final oral public examination.

Most Ph.D.-granting departments are composed of a department chairperson; a director of graduate studies; and assistant, associate, and full professors. The director of graduate studies has a key role in establishing departmental policy in the graduate program.

One of the assistant graduate school deans is primarily responsible for implementing policies and practices specifically aimed at minority students. This function, as performed through his office, has existed since 1979, when the present assistant dean took office. Minority-related activities before that had been performed by the dean of admissions. The office that now carries out this function is supported by "hard" rather than "soft" money.

Policies and Practices Regarding Minorities in Graduate School

Following is a description of Institution E's policies and practices with regard to minority graduate students in key areas. Some of these activities are undertaken at the graduate school level and others at the departmental level.

Recruitment

The office of the graduate dean has the responsibility for recruiting minority students and coordinating other recruitment activities at the departmental level. Departments do very little recruitment of their own. An assistant graduate dean is primarily responsible for this activity, as well as for most of the other activities concerning minority students carried out at the graduate school level. Recruitment duties include the development and distribution of literature aimed at attracting minorities, and several recruitment trips per year. Institution E maintains relationships with feeder institutions, some of which are traditionally Black institutions. There is a line item to support recruitment activities; the yearly budget runs about $17 thousand. On a more informal level, minority graduate students are enlisted to contact prospective acceptees to help decrease their feelings of isolation and smooth the entry to graduate school.

Of the departments studied, only one conducts recruitment for minority graduate students that is separate from that undertaken by the graduate school. The social science department solicits names of promising minority students from professional organizations and programs, and supplies them to the graduate school for inclusion in the recruitment activities. A few years ago, this department also had a summer program for Black college juniors and seniors during which the participants did research and attended seminars on the campus. It was very successful, but the participants tended to be the best in their classes and usually ended up in medical school. The department's Black students and alumni assist in recruitment. It, too, maintains relationships with feeder schools, including some traditionally Black institutions.

Admissions

The assistant graduate dean responsible for minority-related activities reviews all minority applications to identify promising students. When the lists of potential candidates arrive from the departments, he points out possible candidates who may have been omitted. In one-fourth to one-third of the cases when this occurs, he and the graduate dean are successful in persuading departments to take a second look at the student, and in perhaps a half dozen cases they have succeeded in persuading departments to admit students. The final decision to accept or reject a student, however, is made at the departmental level. Each department has its own policies and practices regarding admission of minority students.

Humanities Department. This department has 45 to 50 doctoral students, with an acceptance rate of 30 percent overall. There are no Blacks in the department, but there are nine Hispanics. The director of graduate studies was unable to give a minority acceptance rate. He stated that he would like to see more minorities in the program, but that Blacks very seldom applied. Admissions criteria include a B.A. or M.A. in the discipline; GRE scores (there are no official cut-off scores, but "anyone not in the 90th percentile would have a hard time getting in"); undergraduate transcript (both GPA and courses are looked at); three letters of recommendation; a statement of career goals; and a piece of original scholarship. This last he rated as the most important factor in admission. The others he could not rank since "it's the combination that counts." One difference exists in the application of admissions criteria to minorities as compared to Whites: If English is not the applicant's first language, a lower than usual GRE verbal score is acceptable.

Science Department. This department has 14 doctoral students and has an acceptance rate of 20 percent. At present there is one Black student and one Hispanic student. The chairperson stated that in the past six years there have only been one Black and one Hispanic student. The department's only criterion for admission, according to the department chair, is that the student's area of interest must match that of a faculty member.

Social Science Department. This department has 40 doctoral students, and an acceptance rate of 25 percent. There are five Black doctoral students (the acceptance rate for Blacks is 50 percent) and two Hispanic students (the acceptance rate is 100 percent). The director of graduate studies stated that he would like to enroll more minority graduate students. Admissions criteria include GRE scores (these are optional--"the faculty is split on the value of GRE scores"); undergraduate grade point average; three letters of recommendation; and a statement of interest. The director of graduate studies considers the undergraduate grade point average to be the important criterion for admission, but the statement of interest is also looked at very carefully. (A faculty member in this department stated, however, that he felt the GRE was being given unwarranted importance in admission.) Faculty are willing to accept lower GRE scores from minorities than from Whites if there are other "redeeming factors."

The department has three separate admissions committees--one for each specialty area--but final decisions are made by the entire faculty. Minorities are identified by the graduate school and by the department. They are listed separately, and the department tries to take as many of these as are strong enough to finish the program. The director of graduate studies had this to say regarding minority students who have been applying lately to the program: "Actually, the students...have been top quality. We would want them regardless of their race. Some years ago it was not the same story. Minority graduate students tended to be less well prepared than Whites. This is not so today."

Financial Support

All three departments provide full support to their graduate students, minority or not. Minority students in underrepresented fields are often, but not exclusively, supported with G*POP funds administered by the graduate school. In other cases the graduate dean requests that departments provide full or partial financial aid; if partial, the dean's office provides the rest of the funding. Students in the humanities department are expected to teach, and a full-time teaching assistant receives full tuition. It was generally believed that most students did not work outside the department: "Nobody works. They don't have time."

Other Support Systems

The major type of support system other than those described above consists of counseling services. At the university level, the counseling center has a Black psychologist who has set up a special program in which Black graduate students can interact and talk about common problems. There are also two assistant deans who are available to assist with financial aid, academics, housing, and personal problems. The assistant graduate dean who is responsible for minority-related activities has also organized a network of people on whom he can count to assist in activities involving minorities. For example, he has set up projects whereby minority faculty and graduate students from all departments can get together. There is also a Black graduate caucus, and a center for minority students.

Each department provides academic counseling and guidance to all graduate students. Some faculty in the humanities department, which has several Hispanic students, have organized a support network for incoming

Hispanic students whereby Hispanic students are assigned to contact the new students before arrival on campus and to help ease the transition to graduate school once these students arrive. In the social science department, most of the counseling, academic and otherwise, is performed by the administrative assistant, who is a minority group member.

Some faculty members and administrators were quite vocal in expressing their feelings about the importance of adequate support systems and mentors for minority graduate student success. They stressed that minority students more than White students need these support networks to counteract the effects of isolation and alienation:

> In a doctoral program you have to have someone who takes an interest in you and supports you--an ombudsman. This person also has to have some clout in the department.
>
> Lack of numbers, primarily [represents one of the biggest problems for minority students], and the feeling that there is not a large and sustainable (as well as sustaining) community. [There is a feeling of] isolation and the consequent lack of interpersonal communication. They tend to stick to themselves.
>
> Many Hispanic students, especially at the beginning, are intimidated by a place like this and adjustment is not easy. [This is] for cultural reasons--it is a residential college and a very competitive place.... Special efforts have to be made in special areas. There should be an idea of a community-support network.

Conclusion

Institution E has made a genuine commitment to the recruitment and financial support of minority graduate students. The assistant graduate dean responsible for minority-related programs and activities is extremely sensitive, committed, and knowledgeable about issues relating to access, retention, and support of minority graduate students. Other administrative staff in the graduate school also appear to be sensitive to these issues.

The attitude toward minority issues that is evident at the administrative level has not filtered down to the departments. Most of the directors of graduate study and faculty seemed unaware of the graduate school commitment and did not perceive any kind of leadership regarding these issues as coming from the graduate dean. The departments varied in their commitment to the recruitment and support of minority students. Departmental attitudes ranged from that of total unawareness of the issues, to acknowledgment of the issues (but very little action), to a generally supportive departmental atmosphere (the social science department). The areas of minority support that were the domain of the departments were the ones that showed the most neglect: admissions, academic counseling, and interaction.

The area of academic counseling and interaction encompasses the orientation of the graduate student to what is expected of her or him by the department, the establishment of a relationship with a mentor, and the establishment of collegial relationships with other faculty and students. One of the institutional staff summed up the importance of these interactions as follows: "Support from the general system is important, but not nearly as important as the feedback and support from professors. Respect at that departmental level is what is most important." He went on to say that the factors that contribute most to minority persistence are "supportive faculty, supportive adviser and mentor--a generally supportive departmental attitude." It seems that at Institution E (as, perhaps at most graduate institutions) what determines the existence of a supportive departmental attitude is the interest on the part of a department chairperson, a director of graduate studies, or a bloc of influential and powerful faculty.

There is a feeling on the part of some of the faculty and staff interviewed that, in view of its preeminence, Institution E could take a leadership role in aggressively recruiting minority graduate students and in making sure that departments throughout the institution become aware of the institutional commitment to enroll and support minority graduate students. They said that, with its reputation for excellence, Institution E was in a unique position to influence other institutions to make similar commitments, and to impress upon them the importance of such actions.

Institution F

Historical Perspective

Institution F is a part of the larger of two major university research centers of a state university. Part of the state higher education system, the state university system also consists of four other campuses. Established in a rural suburb in the mid-19th century, this land-grant university's original mission was to help agriculture and the state's incipient industries. Its sister campus was established in the state's largest city in the early 19th century, and its purpose was to train professionals: physicians, pharmacists, dentists, and lawyers.

The state in which Institution F is located has had a history of providing very little support for public higher education. In fact, although four previous attempts had been made to establish a university system, it was not until the fifth attempt, in 1920, that a system was finally assembled. Until recent years, this state has been listed among those providing the least for the higher education of its people, and it still ranks well below the U.S. average in state support for higher education per $1,000 of personal income. At present, the university is in a state of flux. There is a great deal of interest in reorganizing the system to meet the needs generated by shifting enrollments, the urgency of financing in the 1980's, and the need to revise the old dual system of segregated colleges.

In 1969 and 1970, 10 states--among them the state in which Institution F is located--were notified by the Office for Civil Rights (OCR) that they had not dismantled their statewide dual systems of public higher education. OCR also alleged that these states had failed to take steps to overcome the effects of past segregation and required each state to file a statewide plan for the desegregation of its public higher education system. Furthermore, as an Adams plaintiff, Institution F's state was notified in 1973 by OCR that its public higher education institutions were not in compliance with Title VI of the 1964 Civil Rights Act and was requested to submit a new desegregation plan. The plan, which was developed by a biracial task force appointed by the governor, was accepted by OCR in June 1974.

The task force adopted the view that, in a shift from the 1974 emphasis on desegregation, future efforts should ensure the existence of viable public postsecondary educational institutions offering quality programs open to all citizens. It organized its deliberations under nine major areas, among them two areas that are particularly relevant to this study: graduate/first-professional accessibility and retention of minority students.

As part of the public higher education system, Institution F is required to meet goals set by the desegregation plan for first-time enrollment of Black students in graduate school. The state's status report on equal postsecondary educational opportunity for July 1982 through

September 1983 revealed that the percentage of Black first-time graduate students continued to decline in 1983 and recommended that this enrollment be increased through "individual and collective strategies."

Institution F is located in an area that has a very large Black population, but a small Hispanic population. The state higher education system has four predominantly Black colleges, and at Institution F Black enrollment rose by 21 percent from 1974 to 1980, more than double the campus enrollment rate.

Of the 50,000 students at the four main campuses, 23 percent are graduate or professional students. This ratio is far below that of leading universities. A recent report documented a need for high-quality graduate programs, more recruitment of high-quality students, and an increase in fellowships and teaching assistantships.

The campus is vast and sprawling. The dignified red brick and white federal-style buildings serve as somewhat incongruous backdrops for the bustling activity generated by its close to 40,000 students. A newcomer might be intimidated by the size of the campus, its forbidding buildings, its air of impersonality. One staff member commented: "One has the feeling that this is an inhospitable place." It is a commuter campus, with many of its students living off-campus in the suburbs surrounding the school or in the nearby city.

Organization of the Graduate School

There are 37,500 students on campus, 7,500 of whom are graduate students. Minority graduate students constitute about 9 percent of this number. The graduate school (Institution F) offers 83 master's and 62 doctoral programs. The university's mission at the time of its founding--to help the state's agriculture and industries--is evident from the large number of graduate degrees it offers in engineering and scientific specialties, including an extensive agricultural and marine component. It also provides a fairly well-rounded set of programs encompassing the traditional liberal arts and humanities, as well as the social sciences. The professions are not as well represented since these are seen to be within the purview of the other major institution in the system.

Undergraduates outnumber the graduate students by far, and the campus orientation is toward undergraduate education. This is evident in the lack of availability of services and facilities for graduate students: residence halls, career development services, and library holdings.

The chief administrative officer for graduate programs is the dean for graduate studies and research. There is an associate dean for faculty and program development, an associate dean for research, and an assistant dean for graduate studies. In the layer of authority just above the deans are the provosts, who report directly to the chancellor (a position similar to that of president of a university). There are five provosts who preside over the following divisions: behavioral and social sciences, arts and humanities, agricultural and life sciences, human and community resources, and mathematical and physical sciences and engineering. Each provost has an assistant provost, whose responsibility is to oversee minority-related activities at both the undergraduate and graduate levels for that particular division. In addition, the assistant dean for graduate studies is responsible for implementing the graduate school policy toward minority graduate students. In view of this very unusual and confusing structure, it might be helpful to consider the assistant dean as the graduate school representative for minority-related activities and each assistant provost as the representative (together with the director of graduate studies) of these activities at the departmental level.

Policies and Practices Regarding Minority Graduate Students

The institution has a written commitment to all minority students; the graduate school has an unwritten commitment to minority graduate students. Following is a description of Institution F's policies and practices regarding minority graduate students in key areas affecting these students.

Recruitment

The assistant dean for graduate studies does some recruitment of minority students, usually at major conferences where several schools are represented. He also maintains relationships with feeder schools. This office has developed recruiting materials specifically focused on minority graduate students. The fund for minority recruitment is $2,000 per year.

Much of the recruitment of minority graduate students is conducted at the divisional level by the assistant provost. Following is a description of recruitment activities as they are undertaken by the divisions that oversee the departments in this study, or by the departments themselves.

Humanities Division. The assistant provost encourages the departments in this division to include minorities in their recruitment efforts. Until this past year, he also made recruiting trips to several southern colleges, including some predominantly Black institutions. For those departments that do their own recruitment of minorities, this office offers to help defray the expenses of preparing brochures, flyers, and other material.

The humanities department chosen in this study is making an attempt to recruit minority students. This attempt originated due to the interest of the assistant director of graduate studies, who almost single-handedly organized the following activities: a mailing for the past three years to 500 schools (these schools include all historically Black colleges, those with significant minority populations, and every Afro-American studies program in the country); a mailing last year of the same descriptive materials to all minority teachers of that particular humanities subject in the major metropolitan areas adjacent to the university; a mailing once a year to 100 schools (including historically Black colleges) of materials describing a particular program within the department. The results of these recruitment efforts have so far been very discouraging in that the mailings have resulted in very few responses.

Agricultural and Life Sciences Division. The assistant provost undertakes most of the recruitment for the departments within the division and has developed an impressive array of recruiting materials specifically aimed at minority students. His recruitment activities are concentrated on historically Black colleges as well as predominantly Black colleges in the South and Southwest. He visits approximately 15 colleges a year and attends conferences for minority students in the areas represented by his division; he also distributes widely brochures and fliers describing opportunities for minorities in the division. All this activity seems to have been productive. The number of Black graduate students in the division increased from 3 to 35 in the period from 1977 to 1983.

Of the two science departments looked at in this division, one relies solely on the recruitment activities of the assistant provost and the other has conducted limited recruitment using Peterson's Guide and a mailing list of historically Black colleges for disseminating departmental information. This department also supported the recruiting mission of one of its students to her undergraduate institution.

Social Science Division. The assistant provost assists the departments in their recruiting of minority students, and also does some recruiting herself.

The social science department included in this study undertakes extensive recruitment, which includes developing its own flyers aimed at attracting minority students. The department has a minority affairs committee, one of whose charges is to recruit for the program. They make a number of recruiting trips on a yearly basis and attend professional meetings and conferences that have high minority attendance. They are also in the process of organizing a minority alumni association, one of whose functions will be to help in the recruitment effort. They maintain relationships with minority professional associations in the discipline and with feeder institutions that are predominantly Black.

Admissions

The office of the assistant dean for graduate studies channels application forms to the departments, and the decisions to admit or reject are made at that level. No identification of minorities is done at the graduate school level, although applicants may provide racial identification (it is optional). Many of the staff interviewed, especially at the departmental level, did not know that the application form had a box for racial self-identification. Because of the large numbers of applicants to the graduate school, the processing of application forms has had to be computerized and is very impersonal at that level. Following is a description of the admissions processes of the three divisions and of the selected department within each division.

Humanities Division. The assistant provost who oversees minority-related activities has virtually no input into the admissions decisions. He considers this purely a departmental matter. This past year, however, he made a notation on minority applicants' application forms to the effect that the application fee should be waived. At times he talks to departments about admitting minority students who seem promising.

The humanities department had, in the fall of 1983, 110 applicants for both master's and Ph.D. degrees (disaggregated data were not available), of whom 93 were accepted, and 51 enrolled. That fall, there were four Black applicants for either the M.A. or Ph.D., of whom one was accepted for the M.A. program, none for the Ph.D. In a department of about 300 master's and doctoral students, there are presently 17 Black Ph.D. students enrolled in the program. No Hispanic students are enrolled. The director of graduate studies feels that the numbers should be increased, but realizes that the market for minorities in the humanities is not large.

Admissions criteria include a 3.5 GPA (in master's level studies), a GRE verbal score of at least 440, and three letters of recommendation. These are in order of importance, with the GPA being by far the most important. These criteria do not differ from those required by the graduate school, and there are no differences in criteria for minorities and Whites. There are three faculty members on the admissions committee. Although there is no formal procedure for identifying minorities, the committee is "very aware of the importance of enrolling minority students." There is also an emphasis on the importance of enrolling students who "are capable of doing the coursework required by the program." The department cites this as a reason for not making exceptions in applying criteria strictly to both minority and White applicants.

The Division of Agricultural and Life Sciences. The assistant provost monitors the admission of promising minority graduate student applicants. Once he has recruited a student (and he does most of the recruiting for the division), he follows him or her through the application process. He requests that the application fee be waived, if necessary. Also, he is an advocate for some students whose qualifications may not meet the established criteria but in whose academic potential he has faith. In most, but not all, of these cases he is able to work out agreements with the departments.

Science department I is an interdisciplinary program that has approximately 50 doctoral students. Out of 35 applicants each year, the department typically accepts 15. There are presently three Black doctoral students and one Hispanic student in the department. Figures on Black and Hispanic acceptance rate were unavailable. The director of graduate studies wishes that the department had more minority graduate students, and feels that the department makes a great effort to recruit minorities, although "sometimes we bend over too far."

Admissions criteria are, in order of importance: grade point average, statement of goals and interests, GRE scores (no cut-off scores), and three letters of recommendation. The department is willing to bend the rules for minority applicants, who are identified through the application form and by the assistant provost.

Science department II has about 25 doctoral students, 1 of whom is Black; there are no Hispanics. The department receives about 25 applications a year, and has an acceptance rate of 40 percent. The chairperson of the department does not remember having had a Black applicant for the doctoral program. The Black student in the program was recruited by the assistant provost, and the department would like to enroll more minority students.

Admissions criteria include three letters of recommendation, a 3.0 GPA, GRE scores (there are no cut-off scores), a statement of purpose, an undergraduate degree in the subject, and a list of courses the student has had as an undergraduate. The first three criteria are in order of importance, with criteria three and four being assigned the same value. The admissions committee also looks for personal characteristics in applicants, such as tenacity and willingness to work. The admissions committee is made up of faculty from the various subspecialties in the department. Applicants are put into four categories; those in the first three groups are placed on a list that is circulated to faculty, who choose those students for whom they want to serve as advisers. The assistant provost brings to the attention of the department those minority applicants he feels are likely to succeed. The department has made exceptions for minority applicants; that is, it has accepted minority students who have not met all criteria, usually as a result of the urging of the assistant provost. The department chair feels that the department's experiences with students who have been admitted under these circumstances have been positive and that making exceptions has been worthwhile: "We've been pretty pleased with our experiences with minorities. We've taken chances in accepting some and they've all paid off."

Division of Social Sciences. The assistant provost "walks" minority applications through the system if students have sent her the application first. In some cases she has encouraged departments in her division to admit minority applicants.

The social science department has 175 doctoral students, of whom 23 are Black and 8 are Hispanic. Of an average of 25 acceptees to the graduate programs, 5 to 8 are minorities.

Admissions requirements differ by specialty area. Departmental criteria include GPA (3.0 to 3.9 is range of acceptable GPA), letters of recommendation, and a statement of purpose. GRE scores are not required. When applications are received from the graduate school, the director of graduate studies distributes them to the different specialty areas within the department, where they are considered and rated by faculty. Technically, however, the director of graduate studies makes the final decision. One of the specialty areas has established an admissions subcommittee for minority students made up of four faculty and three students. At least one faculty member is a minority, as is one of the students. The subcommittee reviews all minority applications for the area and recommends the most promising applicants for admission. The specialty area also has unofficial goals for enrolling minority students. Of 60 applicants to that specialty, for example, 10 minority students would be admitted.

Financial Support

The assistant dean for graduate studies administers two types of grants for minority graduate students--the G*POP grants and grants that the state provides for minorities. There are 18 G*POP grants and about 40 state grants. Other types of financial support provided for minority graduate students are described below.

Humanities Division. Although provosts' fellowships are not specially designated for minorities, departments are encouraged to nominate minority students. The fellowships are administered at the divisional level. These, the state grants, and teaching assistantships are the sources of financial support earmarked for minority graduate students in the humanities department included in this study. (This particular discipline is not one that qualifies for G*POP funds.) During the 1983-84 school year, 35 Ph.D. candidates had teaching or research assistantships. Of these, 3 were Black (the department has no Hispanic Ph.D. candidates).

The Division of Agricultural and Life Sciences. The assistant provost administers 25 graduate assistantships for minorities that are distributed to the departments in the division. He also works with recipients of G*POP funds to supplement support, if needed, with departmental funds. Science department I provides research assistantships to all graduate students (one of its Black students has a national fellowship), while science department II offers research and teaching assistantships to most students (its Black doctoral student currently has a provost's fellowship, and will receive a departmental research assistantship next year).

The Division of Social Sciences. The assistant provost distributes provosts' fellowships. At the departmental level, there are several sources of financial support for minority graduate students. Many of the departments in this division, including that referred to in this study, are eligible for G*POP funds.

The social science department is able to provide support for almost all incoming students. In addition to teaching assistantships, minority students are eligible for funding through the department from a number of nondepartmental sources, including five national training grants, national fellowships, teaching assistantships in other departments, graduate assistantships, and externship and traineeship positions.

Other Support Systems

Other support activities conducted under the auspices of the graduate school include orientation for minority graduate students, some social activities, and provision of housing. For example, the office of the assistant dean for graduate studies holds, in collaboration with another office, a yearly presentation to orient Black graduate students to the experiences of being on a predominantly White campus. A "giant" open house for minority graduate students was also held last year. This office also handles housing for minority graduate students. On a campus where the housing facilities for graduate students are very scarce, 30 apartments have been set aside for minority graduate students.

Humanities Division. The assistant provost attempts to ensure equitable distribution of housing for minorities.

Division of Agricultural and Life Sciences. Some graduate housing has been set aside by the division for minority graduate students, and the assistant provost administers its assignment. He also counsels minority students every semester and provides information on registration procedures. Where appropriate, he refers students to services.

Division of Social Sciences. The assistant provost monitors the success and progress of all students in the division from matriculation to graduation. She can also place two minority students in graduate housing. Counseling is available to those students who wish to seek it.

The social science department provides a variety of support services for its minority graduate students, including tutorial services, a statistics support class, and funds for individual tutoring. Many of these are conducted through the department's minority affairs committee, which also monitors departmental policy concerning minorities. There is also a minority (graduate) students' group that, together with the minority affairs committee, organizes functions such as guest lectures and social affairs, and maintains a relationship with other campus organizations to address minority issues from a general campus perspective.

Conclusion

There seems to be great variation not only in the practices affecting minority graduate students, but in the locus of responsibility for generating these practices and the policies behind them. The institution's unusual structure of authority may be responsible for what could be perceived as a real lack of centralized leadership regarding minority graduate affairs. Although the dean for graduate studies and research, through his authorized representative, the assistant dean for graduate studies, seems to be the logical person to provide this leadership, the existence of a provost (reporting directly to the chancellor) for each division introduces a complicating factor. And the fact that each division has an assistant provost whose responsibility is to implement divisional policy regarding minority students independent of the activities undertaken by the assistant dean, means that there are multiple loci of control and responsibility regarding minority graduate student activities.

The assistant dean for graduate studies, aside from his administration of G*POP and state funds, has very little direct input into what occurs at the divisional and departmental levels. As a result, the divisions can put as much or as little effort as they wish into minority-related activities. The arts and humanities division, for example, has opted to provide minimal leadership and direction with regard to these matters, with the result that it is left to the departments to take the initiative. In the humanities department included in this study, one individual was responsible for the limited recruitment efforts undertaken by that department.

The assistant provost for agricultural and life sciences, on the other hand, has taken a leadership role in the recruitment, enrollment, and support of minority graduate students. That the two science departments included in the study have responded to this leadership is evident from their positive and supportive attitudes toward minority graduate students.

The behavioral and social sciences division represents a position somewhere in between those of the two other divisions. There is some leadership at the divisional level, but the main responsibility seems to lie with the departments. In the case of the social science department studied, the real impetus and leadership comes from the department, which has made a policy of commitment to its minority graduate students and has made a genuine effort to implement it. One of the five minority faculty members in this department explains the reason for its success with minority students: "The leadership sets the tone. All three chairs since I have been in this department have been fair [and supportive]."

The concentration of responsibility and authority in matters relating to minority graduate students in one office would result in a more even implementation of Institution F's policies toward minority students. It would also ensure that activities on the behalf of minority students are not the result of an individual's personal commitment but of a policy, the implementation of which resides in an office, rather than with an individual.

Conclusion

The institutions profiled above represent varying degrees of commitment to minority support as well as different levels of implementation of that commitment. Institution A, for example, comes closest to fulfilling all the characteristics cited by Hamilton (1973) as typifying a successful program. Institutions B and C, by lacking policies regarding minority students at the administrative level, seem to have the weakest systems of support for minorities. Institutions E and F fall somewhere in between, with Institution E having a strong commitment at the graduate school administrative level, but little support at the departmental level, while Institution F's unique structure of authority results in the decentralization of responsibility for implementing the institution's policies toward minority students.

Although Institution A's record of success in attracting and graduating minority graduate students exceeds that of the other institutions, it is not an easy matter to demonstrate an institution's success in recruiting and retaining minority students on the basis of enrollment and retention rates. Factors unrelated to policy can be involved in attracting and retaining students, such as location of an institution in an urban area or an area with high minority population or an agreeable climate; an institutional focus on a discipline or disciplines in which few minorities enroll; or an "elitist" image (unwarranted) that might discourage minorities from applying. Furthermore, many institutions find it difficult to ascertain retention rates because of a problem in distinguishing between stop-outs and dropouts.

The institutions that were the subjects of these case studies represent a sample of the wide range of policies and practices affecting minority graduate students that exist in the six graduate schools that were part of this study. This variation is peculiar to graduate schools due to the nature of graduate institutions and the unique features that differentiate them from both undergraduate and professional institutions:

- The greater autonomy afforded individual departments within the institution and the resulting decentralization of authority and unevenness of policy application.

- The nature of the "educational process" in graduate education which relies on the development of a mentoring relationship between the major adviser and the student as well as on other collegial relationships within the department, rather than on fulfillment of a set of requirements leading to certification.

It is the unstructured, imprecise nature of graduate education that is, perhaps, responsible for the paucity of research on minorities in graduate school and for the lack of clear policies regarding minorities on the part of graduate schools. Additionally, the very features that contribute most to the uniqueness of graduate education are the ones that exacerbate the disadvantages that minorities have been known to have when attempting access to, and participation in, graduate education.

For example, one of the problems minority applicants face is that of unfamiliarity with institutional requirements. This is compounded in graduate education by the fact that many of the requirements can be, and often are, unspecified. Furthermore, minority graduate students' sense of alienation and isolation, which has been well documented, is at odds with the development of collegial relationships within the department that is vital to a graduate student's survival. Moreover, the total unfamiliarity of many faculty with the problems minority students face can be a powerful deterrent to minority access and retention, especially given the power vested in the faculty at a graduate institution.

All of the above argue for the establishment and implementation at the graduate school administrative level of policies supportive of minority student access, participation, and retention. In fact, any attempt to address the problem of low minority retention must consider aspects of minority access to and participation in graduate education: recruitment, admissions, financial support, academic support, and social support systems. In addition, faculty must be made aware of minority graduate students' feelings of alienation and isolation, their difficulty in establishing collegial relationships within departments, and the importance of integrating these students into departmental life. The policies and practices that have been identified here as being the most conducive to minority retention echo, expand upon, and add to those recommended by Hamilton (1973) and others. They are:

- An institution-wide policy concerning minority graduate students initiated, directed, and coordinated at the highest level of administration.

- A clear directive from the graduate dean to the departments regarding the importance of implementing such a policy at the departmental level, and the monitoring of the departments' implementation. (Without departmental involvement, as the case study of Institution E shows, not even the strongest commitment on the part of the graduate school administration can be totally effective.)

- The coordination of recruitment, special admissions, and student services by an entity above the departmental level.

- Identification of minority students at the application stage. This allows the minority affairs officer (or a counterpart) to act as an advocate for the admission of promising minority students who do not meet all admission criteria but who seem to have the potential to complete a doctoral program successfully. It also helps to provide minority students who are admitted with support services from the very beginning of their programs.

- Special admissions arrangements for students with marginal credentials. This may involve use of noncognitive criteria and the provision of support services early on.

- Provision of support services to minority graduate students. These should focus on those areas in which minority students need particular attention.

- An efficient record-keeping system that monitors the effectiveness of efforts by an institution to increase minority enrollment and retention levels.

The resources required for the implementation of these policies are considerable. In addition, an institution's commitment should be complete, incorporating all the features enumerated above. Due to the interrelatedness of these policies, their successful implementation requires that all be present in an institution.

If the minority recruitment and retention efforts of these six institutions are indicative of the level of commitment and support for minority students at graduate schools nationwide, many institutions will have to increase their efforts if they wish to produce more minority Ph.D.'s. Although Hamilton's (1973) study and the report of the National Board on Graduate Education (1976) appeared several years ago, there seem to have been no wide-reaching reforms in the recruitment, admissions, and retention practices of graduate institutions vis-a-vis minority students. In the meantime, Black representation among full-time graduate students, which increased in the 1960's and early 1970's to 5.5 percent in 1974, has since declined to about 5 percent (The College Board, 1985).

The underrepresentation of minorities in graduate education poses a serious problem that transcends the mere goal of achieving proportional representation of minorities at this level. One of the institutional staff described a more important consequence:

> We will see the fruits of this problem several years from now when there will be no faculty members from disadvantaged backgrounds.... There will be a homogeneous faculty (White and middle class). I think that this is a very dangerous possibility.

Another staff member saw institutional action as a necessary step to achieving parity in graduate education:

> Leadership at a university is very important. This institution could do much more. I don't expect it to offer the solution to the problem, but as a major institution, it could play a more important role in relation to minorities in higher education--graduate students, more minority faculty.... It should make a commitment to take a leadership role in doing this.

This exhortation applies not only to the institution referred to in the quotation but to all graduate institutions. At a time of national indifference to principles of justice and equality, the task falls to the graduate institutions to fulfill the leadership role ascribed to them and to vigorously and unequivocally pursue the enrollment and graduation of underrepresented minorities at the graduate level.

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Appendix

Staff Responses to Selected Questions

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Responses from institutional staff relating to perceptions of problems faced by minority graduate students, reasons for their attrition, and recommendations for increasing their retention were particularly interesting. Although responses did not vary much from institution to institution, they did vary somewhat by race of respondent. Responses of White and minority staff, therefore, will be reported separately.

Question: How sensitive do you feel faculty, administrators, and staff are to minority graduate students' needs?

Responses from White Staff:

Sensitivity varies tremendously.

Overall, pretty sensitive.

Fairly sensitive, although particularly in a Ph.D. program they treat everybody pretty much the same. At the Ph.D. level we expect quality performance from all students.

I really don't know about the overall university. I know they're pretty sensitive in this department.

We're pretty sensitive in this department. I can't say that for the entire university. None of us is as sensitive as he/she should be.

I am not aware that there is a need for that. Racism is not as overt in this area [of the country]. It may be more underground. I am not so naive to say that it doesn't exist.

At the graduate office, very sensitive, but in the departments on the whole, not very sensitive (with some exceptions).

Not too sensitive, but they mean well.

Administrators are very sensitive and concerned. It varies at the faculty and staff levels.

Administrators are very sensitive. About staff, it's hard to generalize. Faculty could be more sensitive than they are. At this level faculty like to put the race question out of their minds. They feel that race should not be a consideration. I disagree with them.

> I think where there is a large minority graduate student population there is a great deal of sensitivity towards minority students.... A faculty member cannot teach these students for long without developing some sensitivity.

> I think there is probably a little ambivalence. They generally are concerned when you talk to them about the welfare of minority graduate students here. On the other hand, I find that giving the benefit of the doubt to minority students is difficult in certain departments. I find a certain reluctance to give the [minority] applicant a chance. [We have] the whole spectrum. Faculty in the program are pretty sensitive and want to attract minorities to the field. They are committed to doing whatever has to be done.

> I don't recall ever having heard a complaint.... I believe we're all one big happy family.

Responses from Minority Staff:

> Here [in the department] I think the older ones are more sensitive than the younger ones. The younger ones are more hard-nosed.

> Some faculty are sensitive. My sense is that administrators try to be sensitive--that there is more sensitivity at that level.

> There is too much indifference to the need to bring in more minority graduate students, to actively search for qualified students and not just review applications. And [there is] too much indifference to what happens to them individually once they get here. On the other hand, I have to stress the importance of some very sensitive faculty members whom I have known here. But not the majority. I think the majority still think that somebody else will take care of that and don't see the need to get more directly involved with all aspects of minorities in higher education.

> Faculty members are suspicious of minority students in general. The burden of proof is always put on the students; they have to prove that they have a right to be here. They don't think that Black students are as well prepared as Whites. And they can't relate to the interests of Black students. For example, they don't think that subjects that might attract minority students (such as urban affairs or minority-related aspects of various disciplines) are "serious." By and large they are insensitive. The staff is generally resistant. They will give way to pressure, however.

> [There exists] the implicit assumption that minority students don't know as much or work as hard.

I have been struck by the biased attitudes (with good intentions) of the faculty. Everybody means well. There is a very obvious difference in the way [minority] students are viewed.

It's difficult to say. In some departments faculty are nondiscriminatory and treat all students, Black and White, alike--like third-class citizens.

Depends on the departments. Some are very sensitive and others are not.

It seems that [faculty] are surprised when a minority student does well. It seems that they are accustomed to having problems with minority students.

Question: What are major problems for minority students?

Responses of White Staff:

I can't say that they have been academic. I think money has been a big problem. [And students from historically Black institutions who go to a large White institution] are not used to asking for information and help. There is more support in the HBC environment.

[T]here is a much greater adjustment problem.

Lack of numbers, primarily, and the feeling that there is not a large and sustainable (as well as sustaining) community. Isolation and the consequent lack of interpersonal communication [are related factors]. They tend to stick to themselves.

Am not really aware of any.

Can't think of any.

If they are doing reasonably well they get integrated into the system. If they are having trouble and are marginal (but no more so than White students), they develop a sense of alienation. They do things such as drive cabs [too many hours a week] or move farther away from campus. Reasons for this may be the desire to move back with their family where they will have more support. The effect, however, is to alienate them even more.

They do experience feelings of alienation and isolation.

Responses of Minority Staff:

> [The first is] culture shock, isolation. They want to be loners and do it all themselves. They don't work in groups or support one another.
>
> A major problem is perceiving and coping with this environment. The nature of the expectations faculty and staff have of graduate students is not always understood by minority students. It takes Black students longer than White students to catch on to the nuances of the difference between undergraduate and graduate life. Also, the importance of forming relationships with professors, etc., is not something Black students come here knowing.... Also, they don't get a chance to teach or develop social relationships that are necessary in graduate school that Black students have a lot of difficulty with.
>
> [The problems are not] academic ones. They seem to work outside too much. Finances are a problem.
>
> [A major problem is] lack of financial aid.
>
> [Some major problems are] lack of familiarity on the part of the faculty with specialties that Black students may be interested in. A deep psychological alienation from a university that is perceived as alien, White, and cold. Lack of minority faculty [is another problem]. And there is an attitude of Black students being tolerated here. Faculty regard Black students as undesirable irritants with whom they must put up. And at the graduate level the department is your life--period. [You have got to have] a mentor relationship; you have got to have somebody to guide you, somebody looking out for you.
>
> [In regard to Puerto Ricans, specifically,] any student who comes here from the Island has to learn, and learns within the first 24 hours, what minority means. They have to learn to identify their own identity. Remember they have come from a culture where they are not the minority and all of a sudden people are ascribing certain characteristics to them. They learn to identify themselves with a group. All American universities are racist to one extent or another. I find this country surprisingly racist. And I think the Reagan years have reinforced the racism. The Island Puerto Ricans cannot cope as well as the Puerto Ricans from the inner cities in the Northeast. It's easier to cope with the academics than to cope with the social process. The experience politicizes students. They develop a social and political awareness, and in the process some become very disillusioned with academic life.
>
> A lot of problems [are] generic--for example, the importance of having someone with whom to have a one-to-one relationship. A lot of minority students don't know this. In a doctoral program

> you have to have someone who takes an interest in you and supports you--an ombudsman. This person also has to have some clout in the department. Students have talked about feeling dumb and impotent, feeling that something is wrong with them, that they are by themselves in the department. The feeling was that they needed somebody to tell them how things were, to teach them the ropes, so to speak.
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> Discrimination does play a role. The universities tend to be hostile environments for Blacks.... [They are an] arena where Blacks don't normally feel at home.

Question: What do you think are the most important reasons for dropout of minority graduate students?

Responses of White Staff:

> The minority dropout rate is no better or worse than that of Whites. Sometimes students don't come back because they don't like the university. They take the master's and go elsewhere. Others know they don't stand a chance of making it into the Ph.D. program and don't apply.
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> If [they are] not succeeding, students get no support from either the institution or their peers. They experience alienation and isolation. They also have financial burdens. There are more disincentives for minority students. They are swimming upstream.
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> It's not academic, but personal.
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> The dropout rate is about the same for all. Once they get here the main problems are not academic but can be personal.
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> Academic reasons are the most important. The retention rate here is relatively high, but the completion rate is lower because many don't finish their dissertations.
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> They usually drop out for reasons that don't have anything to do with school. Another phenomenon I've seen is the inability to complete the dissertation.
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> Several things play into [attrition]. Usually, the graduate school strongly encourages departments to admit minority students whom we would never encourage if they were White. We are so caught up in the numbers thing. Often there are people who would have done well at a lesser school, but who have dropped out here. It tends to be such a devastating experience that they drop out of the educational system altogether.
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> Minority students rarely drop out for academic reasons. Personal reasons are the most important ones.

Most dropouts are for financial reasons.

Financial problems. Also, if they really felt that they belonged, had a relationship with a mentor, perhaps they might be able to withstand the blandishments of the "telephone company." However, the reasons are mainly financial.

They just don't have the proper training and communication skills. Also, the quantitative skills are not there. If we can help them with those, then they're all right.

Not over 10 percent have academic problems. A much worse problem is with doing research. Some students come here not knowing what it's all about.

Responses of Minority Staff:

Spouses and lack of financial support are the biggest reasons for dropout.

People don't usually drop out because they can't do the work but because of a mismatch of interests. Sometimes, too, students don't have the drive. It's the same for all races.

Lack of financial aid is an important reason for minority dropout.

Lack of financial support is a major problem. Also, I have been very aware when we are reviewing problem students, that I have been so depressed by the end of those meetings because every one of those students seems to be a minority student. And even when a nonminority student is brought up, he or she is quickly dropped, whereas they seem to go on and on about the minority students. This attitude on the part of the faculty is bound to affect the way students feel about the department and about what they're doing.

There are too many demands [on them]. For example, they may be trying to work too many hours. Quite frequently there are personal problems, too--their spouses, for example.

Most minority doctoral students leave because of career changes. Very few leave for academic reasons.

Almost all dropouts have been for academic, not financial, reasons. Trying to get them through that first year is difficult. They have not learned how to compete when they first start. Students from HBCs have more problems in coping than students from predominantly White institutions.

Question: What do you think contributes most to the persistence of minority graduate students? What recommendations would you make for changes to improve the retention rates of minorities?

Responses of White Staff:

Choosing someone who is capable of doing the job and giving them support. I'm not saying they have to meet all the requirements.... I think that financial support is important.

[Fostering] mentor relationships. [Choosing people who have] innate ability and somebody who recognizes it and develops it and makes the student see that he or she has it.

More financial support. Also, a more supportive attitude on the part of faculty and staff.

An attitude that sheds the stereotyping of minority students. Stereotyping is around, believe me. That kind of attitude will destroy people.

Selecting a really well-qualified group, people who are motivated and determined, and giving them lots of support. We regard it as a real failure if a minority student drops out here.

Factors that contribute most to minority persistence are supportive faculty, supportive adviser and mentor, and a generally supportive departmental attitude. Support from the general system is important, but not nearly as important as the feedback and support from professors. Respect and support at that departmental level is what is most important.

Seriousness of purpose and willingness to talk to us about problems.

Choosing people capable of doing the work, who want to do the work, and then supporting them as much as you can. It's the same for all, but minorities need more help and support.

In general we do too little to establish a feeling of camaraderie among students.... We need to get more faculty participation in order to establish a kind of environment where minority students feel more comfortable.

Responses of Minority Staff:

An institutional policy that aims at supporting and retaining minority doctoral students in the department.

The factor that contributes most to minority persistence is pride, a determination to get through no matter what. Students should also be aware of specific skills that they will need to get through a program. They need to acquire these before they come here. More realistic expectations would help, too.

A program that is very structured and closely monitored would contribute to minority persistence. People who care--role models, especially at the tenured level. More minority faculty. A better defined advisory system for graduate students outside the department that would talk about coping strategies, survival skills.

More financial support.

Institutional commitment to enrolling minority students and keeping them at the institution until they graduate.

Tenacity [on the part of the students] is much more important than being bright. How they perform under adverse situations--stamina.

Make them aware of how it is done [how one gets through school]. The mentoring process is very important, as well as a knowledge of departmental politics.

More minority and women faculty. It is the faculty who have to deal with students who don't understand either the problems of minorities or those of women.

Enough Black professors to constitute a critical mass on campus. Black students must know that Black professors are sensitive to their plight.

Financial support through the dissertation stage. Help with psychological factors, such as an inferiority complex, that impedes them. Positive reinforcement on the part of people who can provide this--faculty. Peer support where they share their problems and can see them in a different perspective.

Get a supportive chairperson. Also, create a critical mass of faculty with tenure and a critical mass of graduate students who are committed to recruiting and retaining minorities in the program. It's important, too, to have numbers of students.

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